City of Carlsbad Preserve

(CNLM No. S042)

Annual Report

October 1, 2009 – September 30, 2010

Prepared for:

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I. INTRODUCTION

This report summarizes the management activities carried out at the City of Carlsbad's Preserve (Preserve) by the Center for Natural Lands Management (CNLM or Center) from October 1, 2009 to September 30, 2010. The reporting period reflects the second year of management of the Preserve and the due date of annual reports to the City by preserve managers. The tasks and objectives discussed below are those derived from the *City of Carlsbad Preserve Management Plan* (PMP)(CNLM/Tierra Data 2008) that was submitted to the City of Carlsbad after review and comment by the United States Fish and Wildlife Service (USFWS), and California Department of Fish and Game (CDFG).

The Preserve represents City of Carlsbad (City) -owned properties that are a part of the City's Habitat Management Plan (HMP) and that therefore require management and monitoring pursuant to the HMP's Implementing Agreement (IA; City of Carlsbad 2004). The Center was hired to perform those obligations, commencing January 1, 2009, hence, this report represents the first full year of management by CNLM.

The Preserve (600.4 acres) is comprised of 13 properties scattered throughout Carlsbad (Figure 1). The most notable properties include the habitat areas within the Crossings Golf Course (198.2 acres) and Lake Calavera (256.1 acres). The remaining properties range from 2 to 30 acres. Vegetation communities include coastal sage scrub, chaparral, sycamore/oak woodland, willow woodland, native and non-native grassland, disturbed areas, and combinations of the aforementioned communities.

Management of the Preserve includes posting and maintaining signs and maintaining fences and gates (capital improvements), biological surveys, habitat maintenance, public services, and reporting. Each of these activities and their results for the management time period are summarized below and fully described within this report.

Summary of Activities

- Sensitive bird and avian community surveys were conducted at most properties
- Sensitive plant surveys were conducted on each property, except for Calavera Lake and the Crossings Golf Course, which were recently surveyed and not part of the Center's contract obligations.
- Surveys for the sensitive Blochman's dudleya (*Dudleya blochmannii*) were conducted at the Crossings Golf Course
- Vegetation maps were developed for each property, except Calavera Lake and the Crossings Golf Course, which were previously mapped.
- Habitat assessments were conducted on all properties
- Zero and moderate-tolerance nonnative plant species evaluations and assessments were commenced.

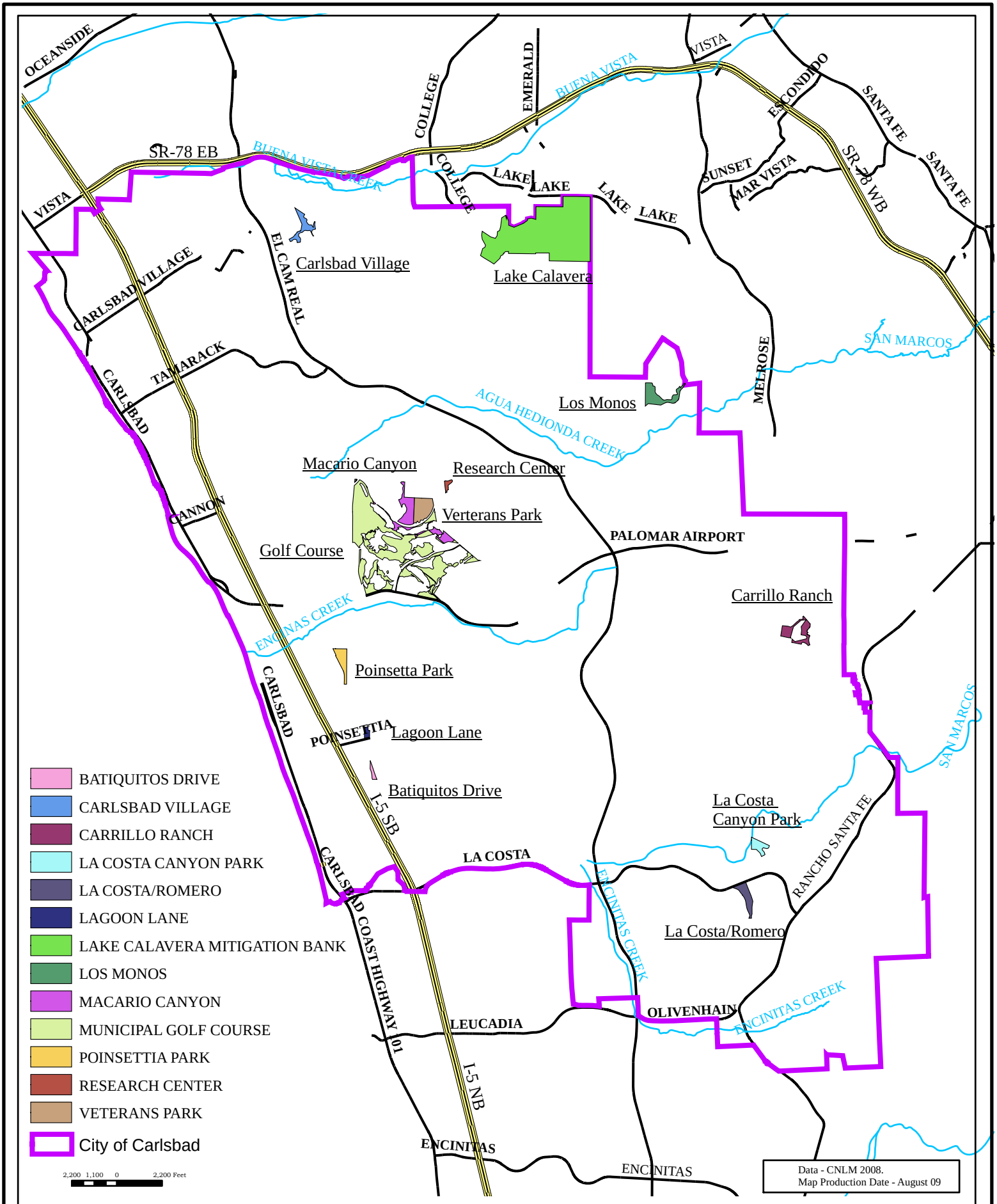


Figure 1
Preserve Locations
City of Carlsbad Preserve - Carlsbad, California

Center for Natural Lands Management

- Zero-tolerant and some moderate-tolerance nonnative invasive plant species were treated or removed
- Routine patrols were conducted to protect the preserve and provide information to visitors. CNLM spent considerable time and resources enforcing unwanted use, picking up trash, and educating the public at Lake Calavera
- Signs and kiosks were installed
- CNLM participated in volunteer events organized by the City and provided public outreach events or education
- CNLM staff met regularly with City staff and the City's Preserve Steward to discuss Preserve Management, as well as other issues pertaining to management and monitoring issues in Carlsbad

II. CAPITAL IMPROVEMENTS

The City is required under the PMP (Section 5) to install fences at Lake Calavera and other locations. The City received a grant from the Proposition A/TransNet Environmental Mitigation Program in June of 2009 which funds the installation of the required fencing at Lake Calavera. This fencing will likely be installed in the fall of 2010. Center staff met with City staff in 2009 and again in 2010 to discuss the other fencing proposed in the PMP. This includes fencing at La Costa Romeria, Macario and Carlsbad Village Drive and a gate at Veterans Park. After careful review from the City Planning Staff and Parks and Recreation Staff, it was decided (in 2009) that the fence proposed in the PMP for Poinsettia Park and Macario at the gate proposed for Veterans was not needed or desired. At Poinsettia Park, the Parks and Recreation Division asked that the Center not remove the nonnative acacia, myoporum, and Eucalytpus trees that line the main road (Paseo Del Norte). These trees provide a barrier to entry along most of Poinsetta Park's western boundary. North of Veterans, a chainlink gate was constructed at the terminus of Twain Street, which blocks access into the preserve areas. At Macario, the City had already installed some fencing in the proposed location, and others nearby, to protect habitat on that Property, so it was decided that the fencing was not needed. City staff also decided to fence only the southern boundary of the La Costa Romeria site (and not the northern side as proposed) and did not see the need for the fencing proposed at Carlsbad Village Drive.

CNLM staff assisted the City in installing small segments of fencing at Lake Calavera as part of their trail program. These segments were used to block access into unwanted areas of the preserve. CNLM staff maintained these fences during the course of the year.

III. BIOLOGICAL SURVEYS

The 2010 management year was the second year of biological surveys carried out by CNLM for all of these properties. However, the city had previously contracted with other firms to conduct

biological surveys at Lake Calavera (Merkel and Associates, 2005) and the Crossings Golf Course (Cotton/Beland/Associates, Inc. 2000). None of the other properties had been surveyed in the past. This year's biological monitoring included vegetation mapping, vegetation assessments, plant list generation, sensitive plant surveys, and sensitive bird surveys, including the coastal Californica gnatcatcher (CAGN, *Polioptila californica californica*), least Bell's vireo (LBV, *Vireo bellii pusillus*) and southwestern willow flycatcher (WIFL, *Empidonax traillii extimus*). In addition, all HMP "covered" species were noted and mapped during these surveys, including the Cooper's hawk (COHU, *Accipiter cooperii*), yellow-breasted chat (YBCH, *Icteria virens*), orange-throated whiptail (*Aspidoscelis hyperythras beldingi*) and others.

In addition to the aforementioned surveys, CNLM also conducted two surveys for short-leaf dudleya (*Dudleya blochmaniae*) at the Crossings Golf Course. This species had been observed adjacent to the golf course in previous surveys conducted in the area.

The primary goal of all monitoring activities is to develop a better understanding of the biological resources on the properties, and specifically, to identify sensitive species. This information is then used to guide future management and monitoring efforts.

The objectives for biological monitoring are as follows:

- Determine the distribution and abundance of state and federally listed bird species. Note other bird species during sensitive bird species surveys. Map (using GIS) all sensitive bird species and raptor species.
- Determine the distribution and abundance of sensitive plant species. Map (using GIS) these species.
- Map vegetation communities.
- Assess the habitat quality of selected vegetation communities.
- Note threats to the preserve areas (i.e. nonnative animals).

A. Methods

A.1. Birds

Surveys for CAGN were conducted following U.S. Fish and Wildlife (USFWS) protocols which consisted of three visits separated by at least seven days. Surveys for WIFL also followed USFWS protocol which consisted of three surveys, one each between May 15 and May 31, June 1 and June 21, and June 22 and July 17 (Table 1). LBV surveys consisted of four visits per site during the breeding season (March 15-August 31). Survey dates, times, and weather conditions are provided in Table 1. LBV, WIFL and CAGN surveys were conducted by Markus Spiegelberg (PRT- 787924-6). Other CNLM staff, Jessie Vinje and Patrick McConnell, conducted the sensitive plant surveys, vegetation mapping, and vegetation assessments. Each property, except for the Crossings Golf Course, was surveyed for CAGN. The Crossings Golf Course was surveyed by Dudek Environmental under a separate contract. The Crossings Golf Course and Lake Calavera were also surveyed for LBV and WIFL. Poinsettia Park and

Lagoon Lane were surveyed for LBV only. All bird species were noted during surveys and all sensitive species were mapped.

Table 1. Survey Dates, Times and Weather Conditions

Date	Property	Survey Time	Weather conditions	Type of Survey
March 2, 2010	La Costa Romeria	06:15-07:05	56°F, calm, partly cloudy	CAGN and avian community
March 2, 2010	La Costa Canyon Park	07:15-08:15	60°F, calm, partly cloudy	CAGN and avian community
March 2, 2010	Batiquitos Drive	08:25-09:00	60°F, calm, partly cloudy	CAGN and avian community
March 2, 2010	Los Monos	09:15-11:00	60 °F, 0-2 mph wind, cloudy	CAGN and avian community
March 3, 2010	Lake Calavera	07:00-11:30	47-60 °F, 0-5 mph wind, clear	CAGN and avian community
March 8, 2010	Veterans/Macario	06:30-08:30	58-60 °F, 0-2 mph wind, partly cloudy	CAGN and avian community
March 8, 2010	Carlsbad Village Drive	08:45-09:45	60 °F, 2-10 mph wind, partly cloudy	CAGN and avian community
March 8, 2010	Poinsettia Park	10:00-11:00	60-65°F, calm, partly cloudy	CAGN, avian community
March 11, 2010	Lake Calavera	06:30-11:00	50-65 °F, 0-5 mph wind, partly cloudy	CAGN and avian community
March 12, 2010	La Costa Romeria	06:15-07:05	58°F, calm, overcast	CAGN and avian community
March 12, 2010	La Costa Canyon Park	07:20-08:20	55°F, calm, overcast	CAGN, avian community
March 12, 2010	Los Monos	09:30-11:00	65°F, 0-2 mph wind, cloudy	CAGN, avian community
March 12, 2010	Batiquitos Drive	08:30-09:00	65°F, 0-2 mph wind, cloudy	CAGN, avian community
March 15, 2010	Veterans/Macario	07:00-10:00	48-70 °F, calm, clear	CAGN and avian community
March 15, 2010	Carlsbad Village Drive	10:15-11:00	70 °F, 2-3 mph wind, clear	CAGN and avian community
March 15, 2010	Poinsettia Park	11:15-12:00	70-75°F, calm, clear	CAGN and avian community
March 18, 2010	Lake Calavera	07:00-11:00	60-705 °F, calm, clear	CAGN and avian community
March 19, 2010	La Costa Canyon Park	06:45-07:45	58-62°F, calm, clear	CAGN, avian community
March 19, 2010	La Costa Romeria	07:50-08:30	65°F, calm, clear	CAGN and avian community
March 19, 2010	Los Monos	10:00-11:30	70°F, calm, partly cloudy	CAGN and avian community
March 19, 2010	Batiquitos Drive	8:45-09:30	70°F, calm, partly cloudy	CAGN and avian community
March 25, 2010	Veterans/Macario	07:00-9:30	60-65 °F, calm, overcast	CAGN and avian community
March 25, 2010	Carlsbad Village Drive	09:45-11:00	60 °F, 2-5 mph wind, partly cloudy	CAGN and avian community
April 9, 2010	Poinsettia Park	08:15-09:00	60-65°F, calm, clear	LBV, CAGN and avian community
April 9, 2010	Carrillo Ranch	09:20-10:00	70 °F, 5 mph wind, clear	CAGN, avian community
April 20, 2010	Crossings Golf Course	06:30-9:10	55 °F, calm, overcast	LBV and avian community
April 20, 2010	Lake Calavera	09:30-11:30	65 °F, 0-5 mph wind, overcast	LBV and avian community
April 26, 2010		08:30-09:45	65°F, calm, cloudy	CAGN, LBV, avian community
May 19, 2010	Crossings Golf Course	06:45-08:45	60-65°F, calm, clear	LBV, WIFL, avian community and rare plants
May 19, 2010	Lake Calavera	09:00-10:15	65°F, calm, partly cloudy	LBV, WIFL, avian community
June 2, 2010	Crossings Golf Course	07:00-09:15	65-70°F, breazy, overcast to clear	LBV, WIFL, avian community
June 2, 2010	Lake Calavera	09:30-11:30	70°F, calm, clear	LBV, WIFL, avian community
June 15, 2010	Lagoon Lane	10:45-11:45	65°F, calm, overcast	LBV, avian community
June 25, 2010	Crossings Golf Course	07:00-08:45	65°F, calm, overcast	LBV, WIFL, avian community
June 25, 2010	Lake Calavera	09:00-11:00	65-70°F, calm, overcast	LBV, WIFL, avian community

A2. Other Wildlife

No focused mammal, reptile, or amphibian or other zoological species surveys were conducted this fiscal year, but any observations were recorded and notable or sensitive species were also mapped and recorded.

A3. Plants

Sensitive plant species surveys were conducted in the fall, winter and spring of 2009-10. The entire area of each property were surveyed were possible. Most sensitive plant species were located using GPS and later transferred to GIS databases. All plant species observed were noted during surveys.

A4. Vegetation Maps

Vegetation maps were developed for all properties except Lake Calavera and the Golf Course. CNLM mapping followed the Draft Vegetation Communities of San Diego County (Oberbauer, et. al. 2008). For a detailed description of these communities, please refer to Oberbauer document. In general, CNLM used a ¼ acre as the minimum mapping unit for both upland and riparian communities; however, on many of the properties, we mapped even smaller than ¼ acre since there were communities that would not have been captured if a strict ¼ acre mapping unit were followed (i.e., open water, native grasslands).

A5. Vegetation Communities

One of the management directives (As per the section 4.3 of the PMP) is to collect baseline of most of the vegetation communities on each City property. The primary goals of this activity are to develop a baseline condition of habitat quality and to direct future management actions.

CNPS Relevé Assessments

General vegetation assessments were conducted using the California Native Plant Society Relevé Assessment protocol. Data collected using this protocol primarily provides information regarding the structure and species composition of each vegetation community, but also provides other relevant information that is needed to document basic long-term changes in the vegetation community. CNLM set up 20 Relevé Assessments on City properties (Table 1 and Figures 2-12). Each assessment was located in an area thought to be most representative of the entire vegetation community.

Table 2. Number and Location of Vegetation Community Assessments

Site	# of Relevé Assessments/ Vegetation Community	CSS Study Plot	# of Oak Woodland Assessments*
Carlsbad Village Drive	1 in CSS		
Lake Calavera	1 in RF, 2 in NG, 1 in CC, 1 in SOC	2	1
Veterans Park/Macario	2 in CSS, 1 in SMC, 1 in CSS/NG	2	
Carrillo Ranch			1
La Costa Canyon Park	1 in CSS		
La Costa Romeria	1 in CSS		
Crossings Golf Course	2 in SWS	2	
Poinsettia Park	1 in CSS, 1 in SWS		
Lagoon Lane	1 in RF		
Batiquitos Drive	1 in CSS		
Los Monos	1 in SMC/CSS		
Research Center	1 in SMC		

*During the year, City staff, City Preserve Steward and CNLM staff met with local oak tree experts. It was decided that the Preserve Steward would develop an oak woodland assessment method. CNLM will use this method in the upcoming fiscal year to re-examine oak trees at Carrillo Ranch and Lake Calavera.

Oak Woodlands

Data was collected from two oak woodland assessment plots. The goal of the work is to provide more detailed information on oak trees (*Quercus agrifolia*) and their microhabitat as a baseline-type condition report. Each plot location was selected as a representative stand of oak trees at Lake Calavera and Carrillo Ranch. Data collected from Carrillo Ranch was within a stand of oaks on the western side of the property and included a census of all the oaks (Figure 8). The diameter at breast height (dbh) of each tree was measured and a list of plant species within the study area was recorded. DBH measurements provides information regarding the age of each tree and stand. After taking measurements from this plot, CNLM staff altered the methodology for data collected at Lake Calavera, so that the data collection could be more easily repeated in future years. At Lake Calavera, we developed a plot with a radius of 20 meters. We took at GPS coordinate of the center of the plot (Figure 2), and then collected trees from the nearest tree from 0 going clockwise. (As it turns out, CNLM staff later met with the City's Preserve Steward and Tom Coleman--an oak tree expert--during a site visit to determine if any oaks in Carlsbad had the Golden spotted oak borer beetle problems, at which time it was decided that in the future, a more comprehensive method employed by Mr. Coleman should be used.)

CNLM staff collected data at the Lake Calavera property on January 29, 2010 and at the Carrillo Ranch property on December 8, 2009. The global positioning coordinates for the Lake Calavera plot are UTM North 3670813.1 and UTM East 474633.6.

Coastal Sage Scrub Monitoring Plots

Although CNPS relevé assessments provide useful data for long-term preserve stewardship, more detail and information about the structure and composition of a vegetation community is needed to appropriately track and respond to change over time. The dominant vegetation community within City properties is coastal sage scrub (CSS). This is also the dominant vegetation community in all City of Carlsbad nature reserves. It also supports many of the sensitive flora and fauna protected by the City's HMP. Therefore, CNLM initiated a more thorough CSS monitoring program at CNLM-owned and managed properties in 2009, and used this same protocol at several City properties (See PMP for the protocol). CNLM permanently installed two plots at each of Lake Calavera, the Golf Course and Veterans/Macario Canyon (Figures 2, 5, and 9). These areas represent some of the largest contiguous nature stands of CSS and most representative (i.e., not restoration areas such as at the Crossings Golf Course) areas of these vegetation community on City properties. In addition, they support the CAGN, which is one of the conditions of locating a CSS plot to a given area. Data collected from these plots are being used in concert with other data collected on other CNLM-managed properties to evaluate long-term changes in the CSS community in Carlsbad.

B. Results

B.1. Birds

A total of 6 pair and 3 single male CAGN were found on City properties; at Carlsbad Village Drive (1 pair), Los Monos (2 males), Veterans Park (2 pair), Macario Canyon (1 pair), and Lake Calavera (2 pair and 1 male) (Figures 2-12). In addition to these CAGN observations during focused surveys, one juvenile CAGN was observed anecdotally on July 14 at the Batiquitos Drive site. In 2009, 10 pair and 1 male CAGN were observed on City properties.

A total of 1 pair and 3 single male LBV were observed at the Crossings Golf Course in 2010. This is the same number as in 2009, and each territory was essentially unchanged between years. No WIFL were observed at Calavera Lake or the Golf Course and no LBV were observed at Lake Calavera, Poinsettia Park, or Lagoon Lane.

Six YBCH territories were found at the Crossings Golf Course (4 territories) and Lake Calavera (2 territories). COHA were detected at Lake Calavera (1 juvenile and 1 adult), and Carlsbad Village Drive (1 individual). Two individual Southern California rufous-crowned sparrows (*Aimophila ruficeps canescens*) were detected at Los Monos. Northern Harriers (*Circus cyaneous*) were observed at Veterans Park/Macario and Lake Calavera. All these species locations, as well as other notable observations, are shown on Figures 2-12.

The complete inventory of bird species, by property, is provided in Appendix A. A total of 46 species other bird species were observed. Notable observations include California quail (*Callipepla californica*), downy woodpecker (*Dendrocopus pubescens turati*) and Northern flicker (*Colaptes auratus*).

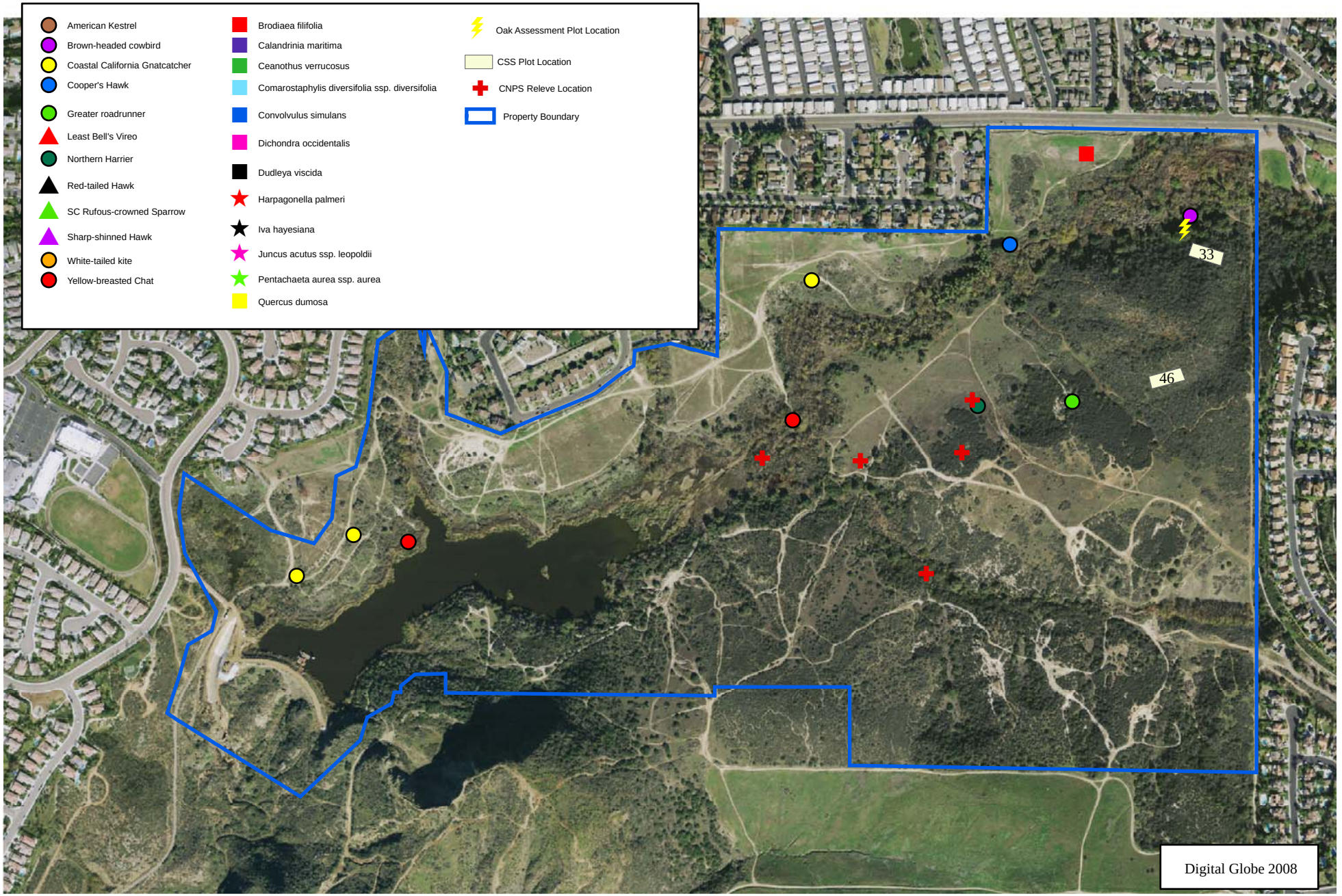


Figure 2
Sensitive Plants, Animals and Habitat Assessment Plot Locations (2010)
Lake Calavera

250 125 0 250 Feet

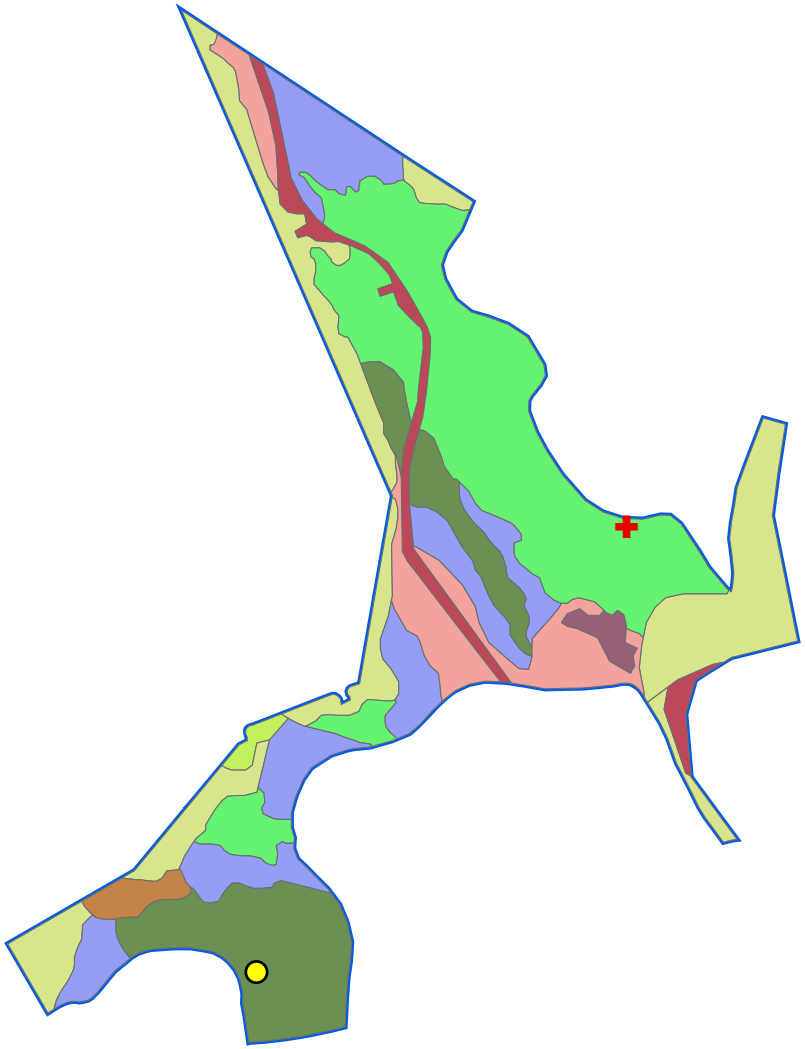
Center for Natural Lands Management

American Kestrel
Brown-headed cowbird
Coastal California Gnatcatcher
Cooper's Hawk
Greater roadrunner
Least Bell's Vireo
Northern Harrier
Red-tailed Hawk
SC Rufous-crowned Sparrow
Sharp-shinned Hawk
White-tailed kite
Yellow-breasted Chat
Brodiaea filifolia
Calandrinia maritima
Ceanothus verrucosus
Comarostaphylis diversifolia ssp. diversifolia
Convolvulus simulans
Dichondra occidentalis
Dudleya viscida
Harpagonella palmeri
Iva hayesiana
Juncus acutus ssp. leopoldii
Pentachaeta aurea ssp. aurea
Quercus dumosa
Oak Assessment Plot Location
CSS Plot Location (Plot #)
CNPS Releve Location
Property Boundary

Comarostaphylis diversifolia ssp. diversifolia
Harpagonella palmeri
Microseris douglasii ssp. playcarpha
Quercus dumosa

Vegetation Community

Baccharis Scrub - Mulefat Dom
Chamise Chaparral
Coast Live Oak Riparian Forest
Developed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub - Baccharis Dom
Diegan Coastal Sage Scrub - Chaparral Transition
Diegan Coastal Sage Scrub - Needlegrass Grassland
Disturbed - Diegan Coastal Sage Scrub
Disturbed Habitat
Disturbed Wetland
Freshwater Marsh
Non Native Grassland
Non Native Grassland - Broadleaf Dom
Open Water
Ornamental
Southern Arroyo Willow Riparian Forest
Southern Maritime Chaparral
Southern Willow Scrub
Valley Needlegrass Grassland



Digital Globe 2008

Figure 3
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)
Carlsbad Village

120 60 0 120 Feet

Center for Natural Lands Management

American Kestrel
Brown-headed cowbird
Coastal California Gnatcatcher
Cooper's Hawk
Greater roadrunner
Least Bell's Vireo
Northern Harrier
Red-tailed Hawk
SC Rufous-crowned Sparrow
Sharp-shinned Hawk
White-tailed kite
Yellow-breasted Chat
Brodiaea filifolia
Calandrinia maritima
Ceanothus verrucosus
Comarostaphylis diversifolia ssp. diversifolia
Convolvulus simulans
Dichondra occidentalis
Dudleya viscida
Harpagonella palmeri
Iva hayesiana
Juncus acutus ssp. leopoldii
Pentachaeta aurea ssp. aurea
Quercus dumosa
Oak Assessment Plot Location
CSS Plot Location (Plot #)
CNPS Releve Location
Property Boundary

Comarostaphylis diversifolia ssp. diversifolia
Harpagonella palmeri
Microseris douglasii ssp. playcarpha
Quercus dumosa

Vegetation Community

Baccharis Scrub - Mulefat Dom
Chamise Chaparral
Coast Live Oak Riparian Forest
Developed
Diegan Coastal Sage Scrub
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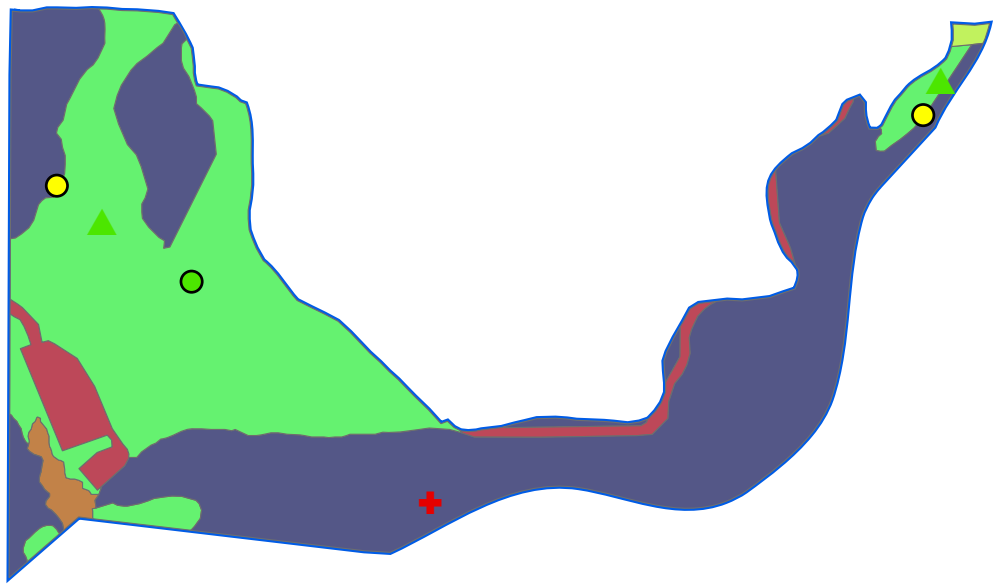
Disturbed - Diegan Coastal Sage Scrub
Disturbed Habitat
Disturbed Wetland
Freshwater Marsh
Non Native Grassland
Non Native Grassland - Broadleaf Dom
Open Water
Ornamental
Southern Arroyo Willow Riparian Forest
Southern Maritime Chaparral
Southern Willow Scrub
Valley Needlegrass Grassland



Digital Globe 2008

Figure 4
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)

Los Monos

140 70 0 140 Feet

Center for Natural Lands Management

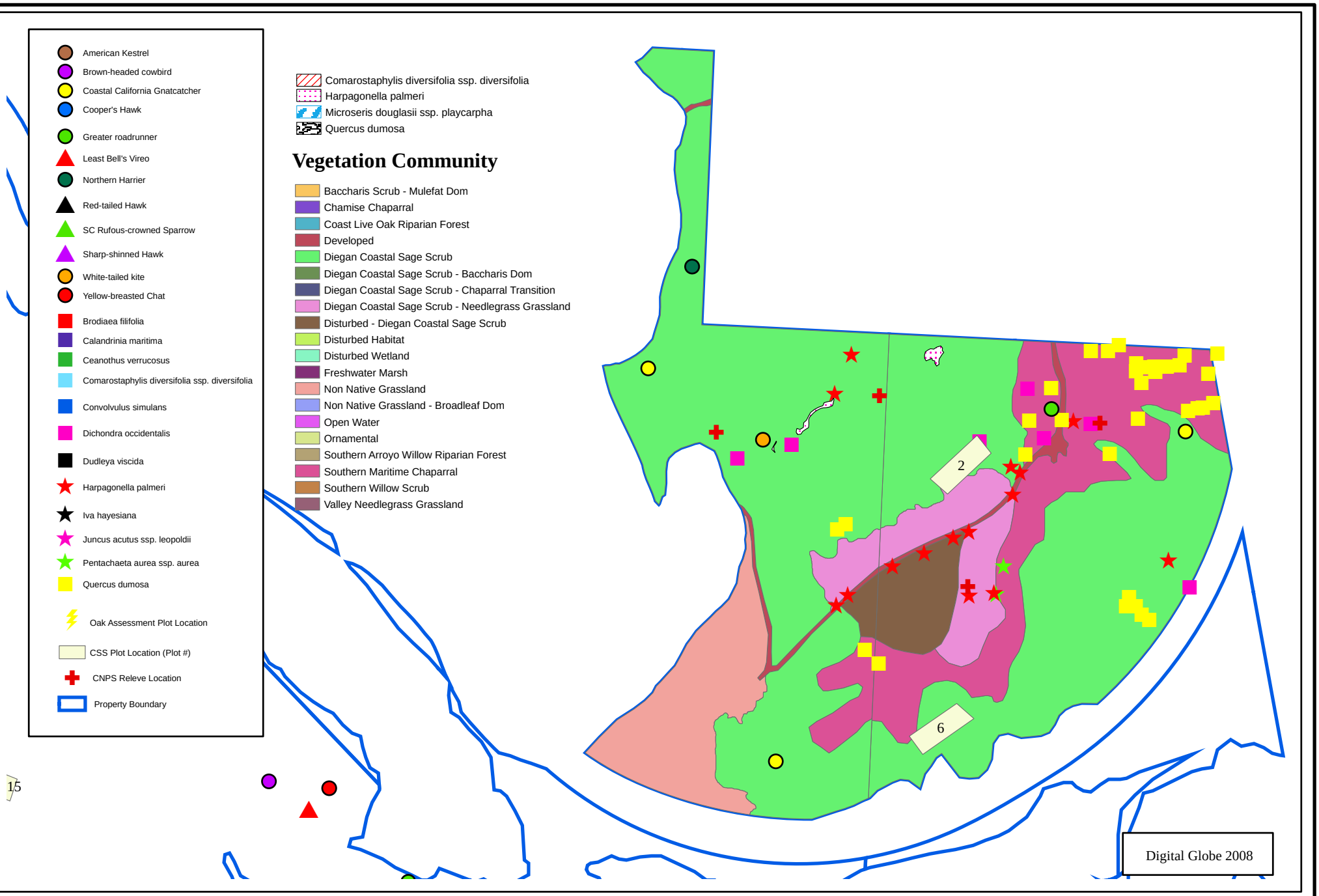


Figure 5
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)

Veterans Park/Macario Canyon

125 62.5 0 125 Feet

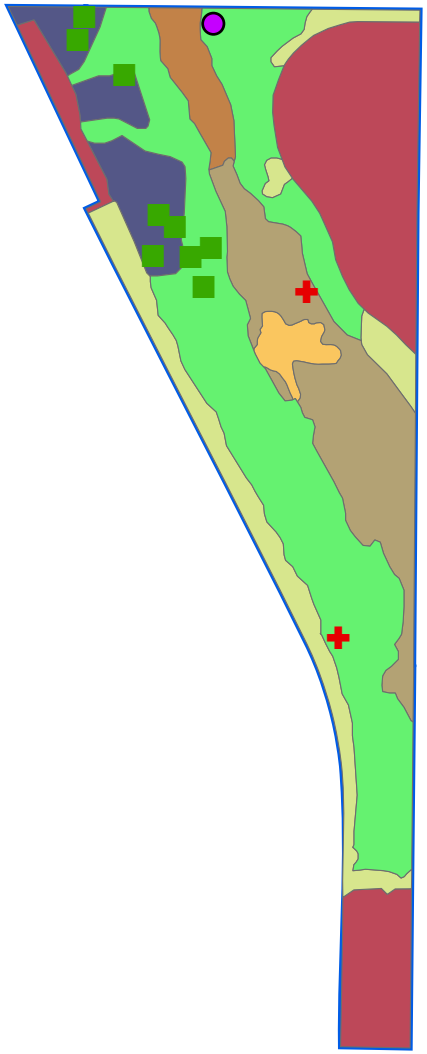
Center for Natural Lands Management

American Kestrel
Brown-headed cowbird
Coastal California Gnatcatcher
Cooper's Hawk
Greater roadrunner
Least Bell's Vireo
Northern Harrier
Red-tailed Hawk
SC Rufous-crowned Sparrow
Sharp-shinned Hawk
White-tailed kite
Yellow-breasted Chat
Brodiaea filifolia
Calandrinia maritima
Ceanothus verrucosus
Comarostaphylis diversifolia ssp. diversifolia
Convolvulus simulans
Dichondra occidentalis
Dudleya viscida
Harpagonella palmeri
Iva hayesiana
Juncus acutus ssp. leopoldii
Pentachaeta aurea ssp. aurea
Quercus dumosa
Oak Assessment Plot Location
CSS Plot Location (Plot #)
CNPS Releve Location
Property Boundary

Comarostaphylis diversifolia ssp. diversifolia
Harpagonella palmeri
Microseris douglasii ssp. playcarpha
Quercus dumosa

Vegetation Community

Baccharis Scrub - Mulefat Dom
Chamise Chaparral
Coast Live Oak Riparian Forest
Developed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub - Baccharis Dom
Diegan Coastal Sage Scrub - Chaparral Transition
Diegan Coastal Sage Scrub - Needlegrass Grassland
Disturbed - Diegan Coastal Sage Scrub
Disturbed Habitat
Disturbed Wetland
Freshwater Marsh
Non Native Grassland
Non Native Grassland - Broadleaf Dom
Open Water
Ornamental
Southern Arroyo Willow Riparian Forest
Southern Maritime Chaparral
Southern Willow Scrub
Valley Needlegrass Grassland



Digital Globe 2008

Figure 6
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)
Poinsettia Park

110 55 0 110 Feet

Center for Natural Lands Management

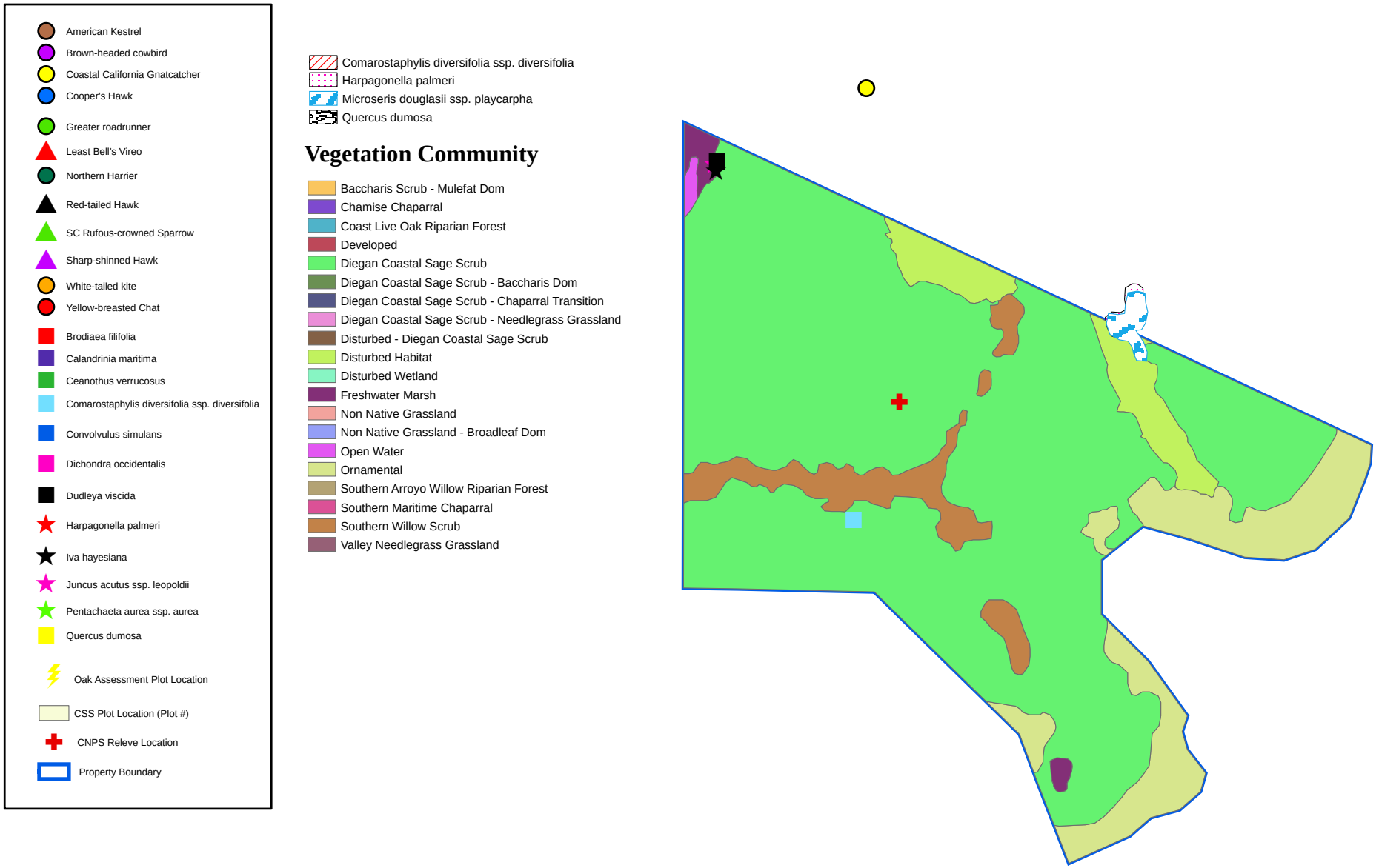


Figure 7
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)

La Costa Canyon Park

70 35 0 70 Feet

Center for Natural Lands Management

American Kestrel
Brown-headed cowbird
Coastal California Gnatcatcher
Cooper's Hawk
Greater roadrunner
Least Bell's Vireo
Northern Harrier
Red-tailed Hawk
SC Rufous-crowned Sparrow
Sharp-shinned Hawk
White-tailed kite
Yellow-breasted Chat
Brodiaea filifolia
Calandrinia maritima
Ceanothus verrucosus
Comarostaphylis diversifolia ssp. diversifolia
Convolvulus simulans
Dichondra occidentalis
Dudleya viscida
Harpagonella palmeri
Iva hayesiana
Juncus acutus ssp. leopoldii
Pentachaeta aurea ssp. aurea
Quercus dumosa
Oak Assessment Plot Location
CSS Plot Location (Plot #)
CNPS Releve Location
Property Boundary

Comarostaphylis diversifolia ssp. diversifolia
Harpagonella palmeri
Microseris douglasii ssp. playcarpha
Quercus dumosa

Vegetation Community

Baccharis Scrub - Mulefat Dom
Chamise Chaparral
Coast Live Oak Riparian Forest
Developed
Diegan Coastal Sage Scrub
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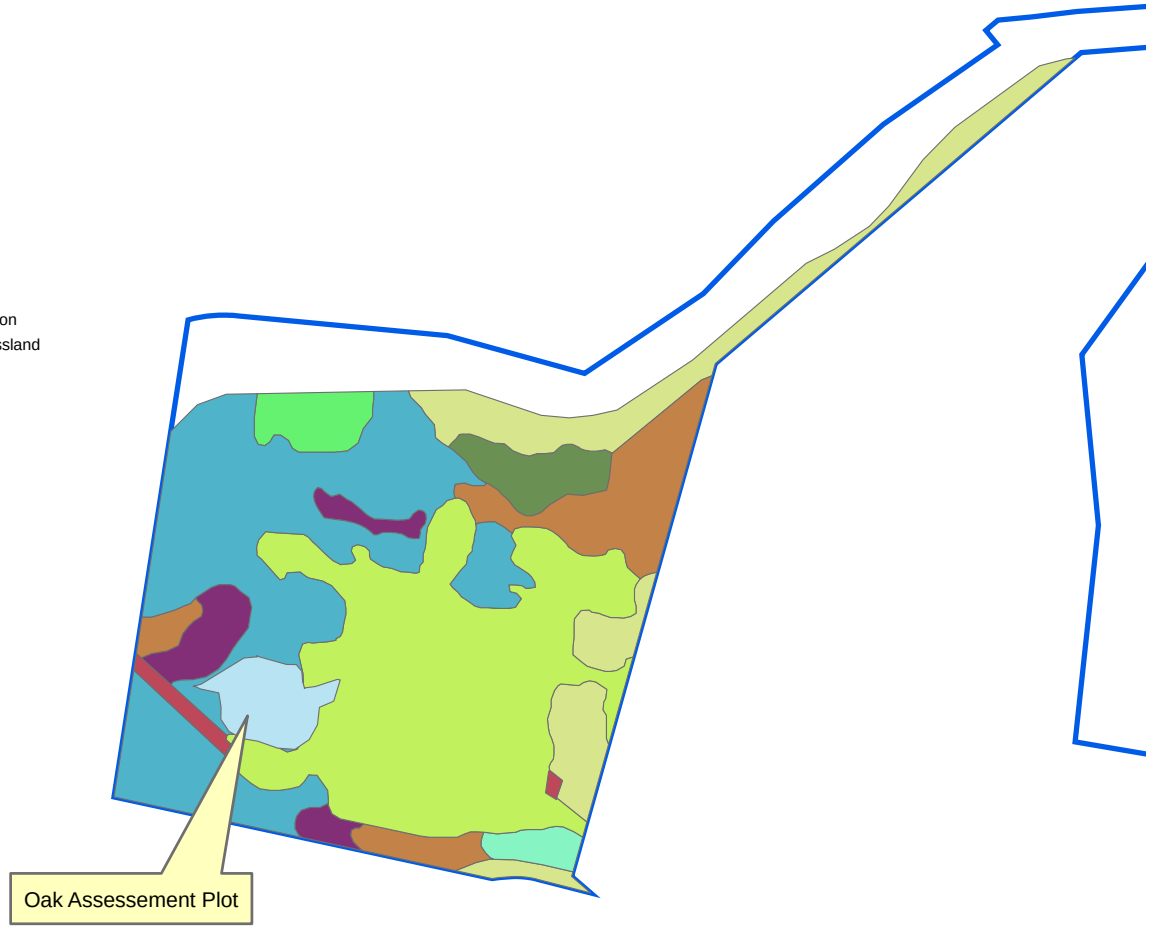
Disturbed - Diegan Coastal Sage Scrub
Disturbed Habitat
Disturbed Wetland
Freshwater Marsh
Non Native Grassland
Non Native Grassland - Broadleaf Dom
Open Water
Ornamental
Southern Arroyo Willow Riparian Forest
Southern Maritime Chaparral
Southern Willow Scrub
Valley Needlegrass Grassland



Areas not mapped with vegetation communities are ornamental landscaping and buildings that are not a part of the preserve area

Digital Globe 2008

Figure 8
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)
Carrillo Ranch

80 40 0 80 Feet

Center for Natural Lands Management

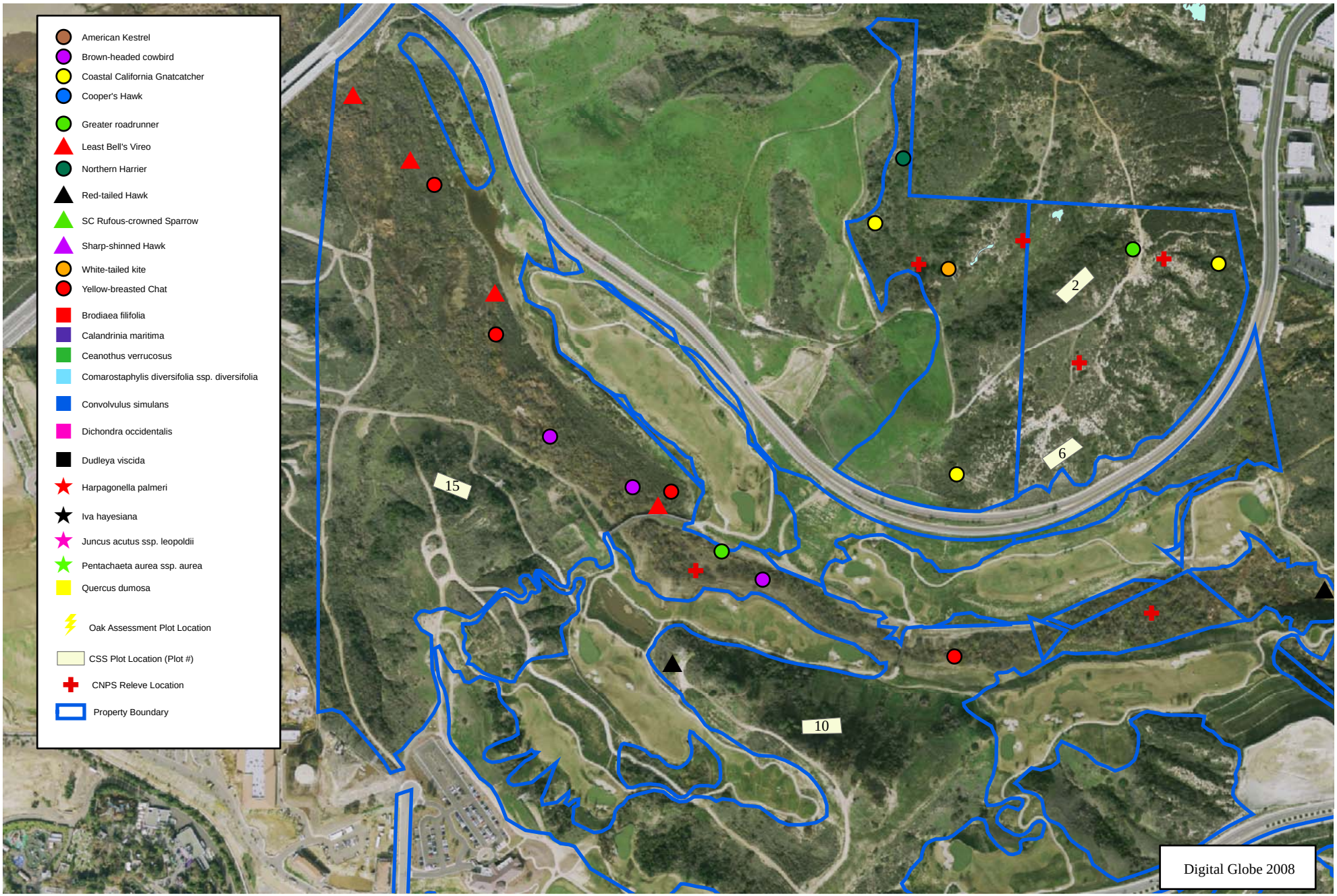


Figure 9
Sensitive Plants, Animals and Habitat Assessment Plot Locations (2010)
Crossings Golf Course

210 105 0 210 Feet

Center for Natural Lands Management

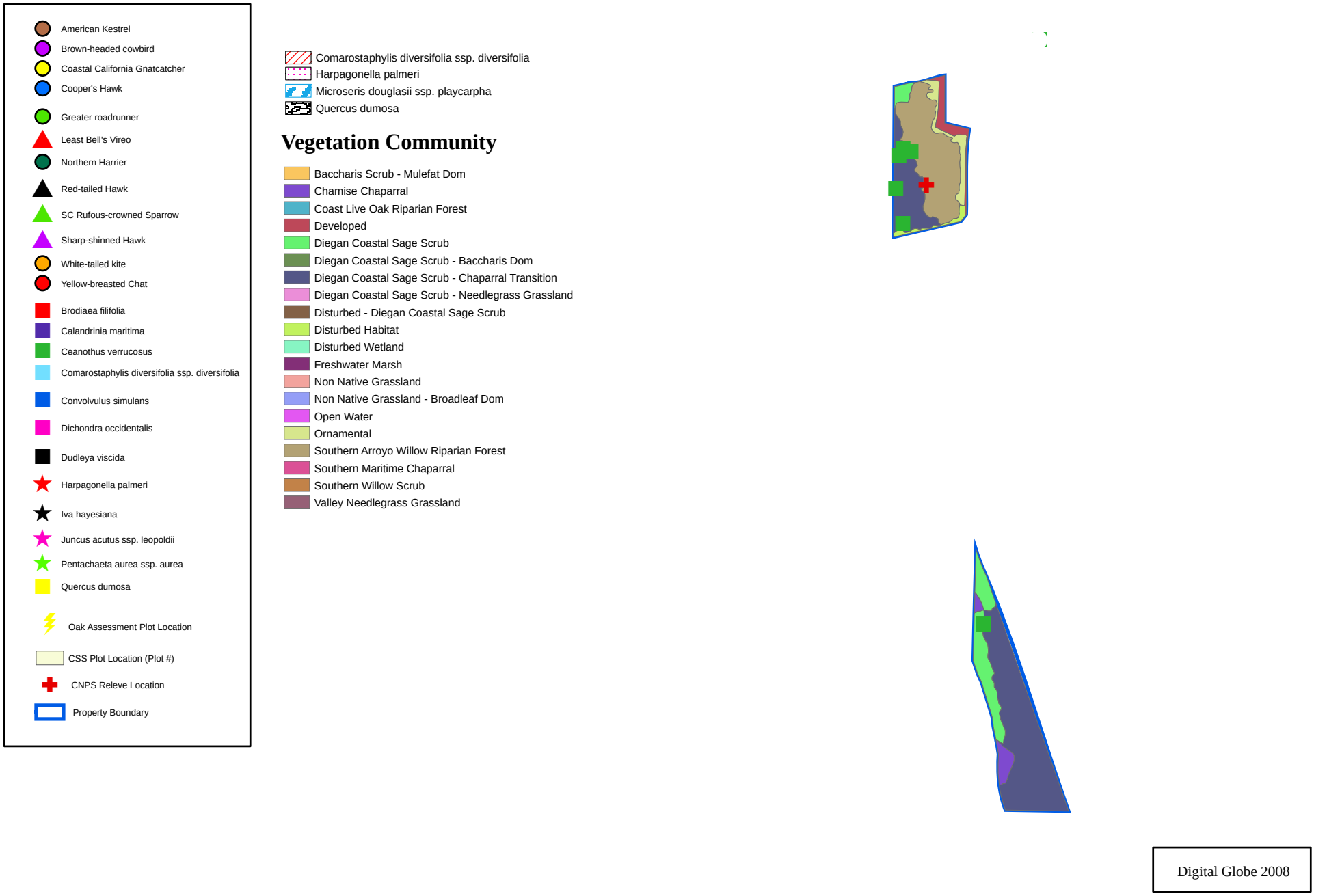


Figure 10
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)
Lagoon Lane and Batiquitos Drive

160 80 0 160 Feet

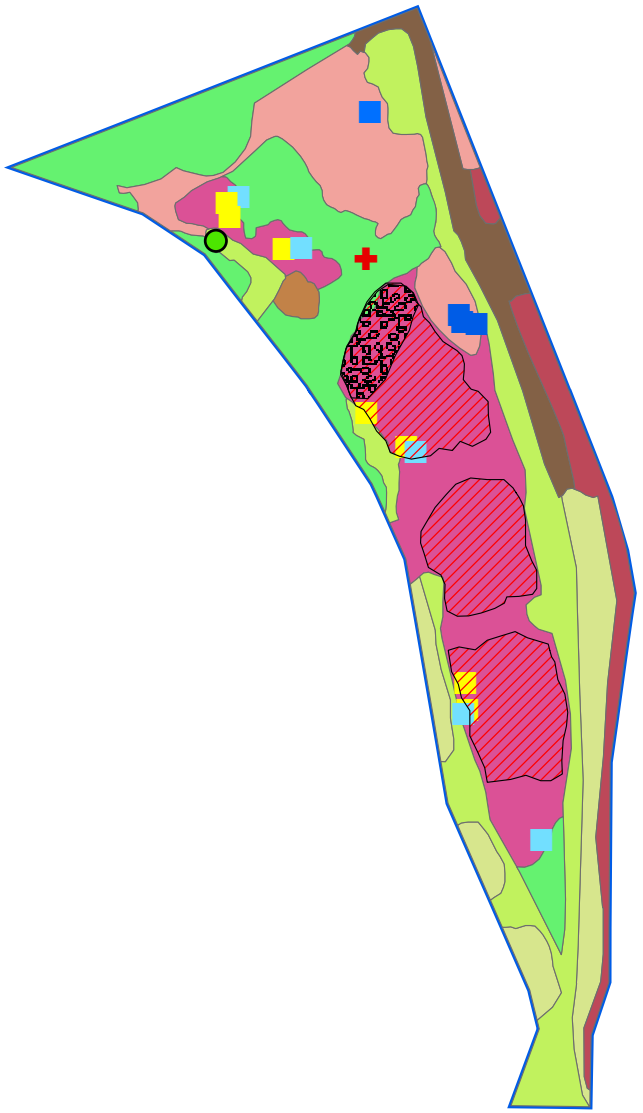
Center for Natural Lands Management

American Kestrel
Brown-headed cowbird
Coastal California Gnatcatcher
Cooper's Hawk
Greater roadrunner
Least Bell's Vireo
Northern Harrier
Red-tailed Hawk
SC Rufous-crowned Sparrow
Sharp-shinned Hawk
White-tailed kite
Yellow-breasted Chat
Brodiaea filifolia
Calandrinia maritima
Ceanothus verrucosus
Comarostaphylis diversifolia ssp. diversifolia
Convolvulus simulans
Dichondra occidentalis
Dudleya viscida
Harpagonella palmeri
Iva hayesiana
Juncus acutus ssp. leopoldii
Pentachaeta aurea ssp. aurea
Quercus dumosa
Oak Assessment Plot Location
CSS Plot Location (Plot #)
CNPS Releve Location
Property Boundary

Comarostaphylis diversifolia ssp. diversifolia
Harpagonella palmeri
Microseris douglasii ssp. playcarpha
Quercus dumosa

Vegetation Community

Baccharis Scrub - Mulefat Dom
Chamise Chaparral
Coast Live Oak Riparian Forest
Developed
Diegan Coastal Sage Scrub
Diegan Coastal Sage Scrub - Baccharis Dom
Diegan Coastal Sage Scrub - Chaparral Transition
Diegan Coastal Sage Scrub - Needlegrass Grassland
Disturbed - Diegan Coastal Sage Scrub
Disturbed Habitat
Disturbed Wetland
Freshwater Marsh
Non Native Grassland
Non Native Grassland - Broadleaf Dom
Open Water
Ornamental
Southern Arroyo Willow Riparian Forest
Southern Maritime Chaparral
Southern Willow Scrub
Valley Needlegrass Grassland



Digital Globe 2008

Figure 11
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)
La Costa Romeria

125 62.5 0 125 Feet

Center for Natural Lands Management

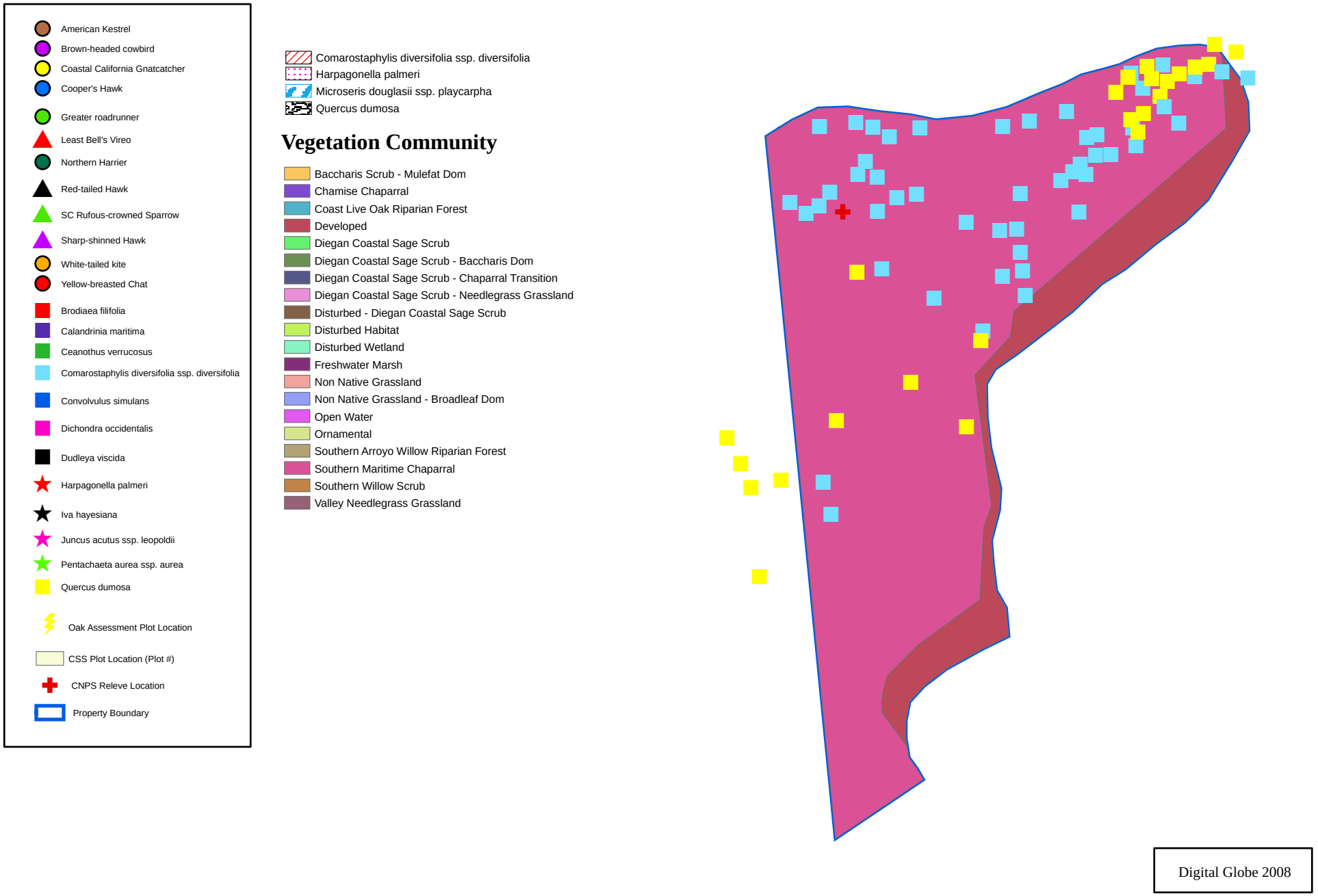


Figure 12
Sensitive Plants, Animals, Vegetation Communities and Habitat Assessment Plot Locations (2010)

40 20 0 40 Feet

Research Center

Center for Natural Lands Management

B.2. Other Wildlife

A variety of wildlife species were observed during surveys (Appendix A). Notable observation include Sara's orangetip (*Anthocharis sara*), coyote (*Canis latrans*), long-tailed weasel (*Mustela frenata*) and gopher snake (*Pituophis melanoleucus annectens*).

The undesired brown-headed cowbird (*Molothrus ater*) was observed at Calavera Lake, Poinsetta Park, and at the Crossings Golf Course (see Figures 2, 6, and 9).

Nonnative bullfrogs were heard at Calavera Lake. This species is known to be a detriment to native wildlife species.

B.2. Plants

CNLM noted all plant species observed on each property (Appendix B) except the Crossing Golf Course and Lake Calavera, for which this data was collected in previous years. A total of 337 species were observed, of which 227 are native and 111 are nonnative.

B.3. Sensitive Plants

Thread-leaved brodiaea (*Brodiaea filifolia*)

The most notable incidental observation during the spring was the occurrence of three flowering thread-leaved brodiaea (a state and federally-listed endangered species) at Lake Calavera (Table 3 and Figure 2). This indicates that more individuals are likely to occur in the area, as only a small percentage flower each year. CNLM provided the City with GPS coordinates of the location of the individuals and this information was added to the City's GIS database. CNLM also notified the Parks and Recreation staff to ensure that they were aware of the location as City planned trails occur near these individuals.

Thread-leaved brodiaea observed at Lake Calavera

Table 3. Listed and Sensitive Plant Species Observed

Species	**2010 Survey Results by Site**												**Carlsbad HMP and MHCP Covered Species**
	BD	CV	CR	LCCP	LCR	LL	LC	LM	MC/VP	CG	PP	RC	X=Carlsbad HMP; Y=MHCP
Thread-leaved brodiaea (*Brodiaea filifolia*)							3						X, Y
Nuttall's scrub oak (*Quercus dumosa*)					59				54			35	X, Y
California adolphia (*Adolphia californica*)					**	**		**	*				
Small-flowered Morning Glory (*Convolvulus simulans*)		25			23								
Sticky dudleya (*Dudleya viscida*)				50									Y
Wart-stemmed lilac (*Ceanothus verrucosus*)	1					16					27		Y
Summer-holly (*Comarstaphylis diversifolia* ssp. *diversifolia*)					85							125	Y

	BD	CV	CR	LCCP	LCR	LL	LC	LM	MC/VP	CG	PP	RC	
Western dichondra (*Dichondra occidentalis*)									Several patches	1 patch			
Palmer's grappling-hook (*Harpagonella palmeri*)				~500					2,296				
San Diego marsh elder (*Iva hayesiana*)				Several patches									Y
Southwestern spiny rush (*Juncus acutus* var. *leopoldii*)				17									
Ashy spike-moss (*Selaginella cinerascens*)										***			
Seaside Calandrinia (*Calandrinia maritima*)										60			
Golden-ray pentachaeta (*Pentachaeta aurea*)									5				
Short-leaf dudleya (*Dudleya blochmaniae*)										0			Y
Small-flowered Microseris (*Microseris douglasii* ssp. *playcarpha***)**				1000									

***Many individuals located within the coastal sage scrub; **Scattered individuals located within the coastal sage scrub; ***Scattered individuals located throughout property; BD=Batiquitos Drive; CV=Carlsbad Village; CR=Carrillo Ranch; LCCP=La Costa Canyon Park; LCR=La Costa Romeria; LL=Lagoon Lane; LC=Lake Calavera; LM=Los Monos; MC/VP=Marcario/Veterans Park; CG=Crossings Golf Course; PP=Poinsettia Park; RC=Research Center.**

All other sensitive plant species

Fifteen sensitive plant species were observed and noted on City properties (Table 3 and Figures 2-12). In addition to the thread-leaved brodiaea, one other Carlsbad HMP covered species, the Nuttal's scrub oak (*Quercus dumosa*), was observed. Other species observed include four MHCP covered species, including large stands of Summer-holly (*Comarstaphylis diversifolia* ssp. *diversifolia*), and several notable species, such as Seaside Calandrinia (*Calandrinia maritima*). No short-leaf dudleya were observed at the Crossings Golf Course for a second year of surveys.

B.4. Vegetation Maps

Many vegetation communities were mapped during the year (see Figures 2-12). The dominate vegetation community is coastal sage scrub. Other communities include chamise chaparral, oak woodland and grassland.

B.5. CNPS Relevé Assessments, Oak Woodland and Coastal Sage Scrub Monitoring Plots

The CNPS Relevé assessments provided a valuable insight to the cover and composition of each plant community monitored (Appendix 3). In general, all sites have high quality habitat, defined a vegetation assemblage that is characteristic of the specific vegetation community (structure and composition) and a low percent cover of nonnative plant species.

Oak Woodland Assessments

Twenty six individual oak trees were found within the oak assessment plot at Lake Calavera. Trees ranged from 1.27 cm to 91.08 cm in dbh, with a mean of 20.38 cm dbh (stdev=23.15cm). Two trees showed signs of thinning canopy, otherwise, all trees appeared to be of good health. Dominant plant species within the plot are listed in Table 4.

Table 4. Dominant Pant Species within the Lake Calavera Pak Tree Assessment Plot

Species	
Quercus agrifolia	*Malosma laurina*
Brassica nigra	*Erodium moschatum*
Artemisia californica	*Crassula connata*
Heteromeles arbutifolia	*Lotus scoparius*
Lonicera subspicata	*Carduus pycnocephalus*
Mimulus aurentiacus	*Amsinkia menziesii*
Rhus integrifolia	*Asterella* spp. (Liverwort)
Carex triquetra	*Hazardia squarrosa*
Club moss	*Eucrypta chrysanthemifolia*
Claytonia spp.	*Pholistoma racemosum*
Cerastium glomeratum	*Ranunculus hebecarpus*
Marah macrocarpa	*Nassella lepida*
Salvia mellifera	*Avena* spp.
Sambucus mexicana	*Ribes speciosum & Toxicodendron diversilobum*

Forty-one individual oak trees were found within the oak assessment plot at Carrillo Ranch. DBH ranged from 0.80 cm to 33.7 with a mean of 7.91 cm dbh (s.d.=7.88). All trees were observed to be of good health (i.e., no canopy thinning or evidence of significant insect or pathogen infestation). Dominant plant species within the assessment area are listed in Table 5.

Table 5. Dominant Plant Species within the Carrillo Ranch Oak Tree Assessment Plot

Species	
Quercus agrifolia	*Malosma laurina*
Heteromeles arbutifolia	*Schinus molle*
Baccharis salicifolia	*Rumex* spp.
Leymus condensatus	*Carduus pycnocephalus*
Salix goodinggii	*Bromus madritensis rubens*
Foeniculum vulgare	*Typha latifolia*
Picris echioides	*Apium graveolens*
Brassica nigra	

Coastal Sage Scrub Monitoring Plots

Results of these CSS plots indicate that the coastal sage scrub located on City properties is generally of very good quality, defined as having the expected species assemblage and cover, with limited disturbance from nonnative exotic species (Figures 13 and14, Table 6). Species richness data is summarized in Appendix 4.

This Area Intentionally Left Blank

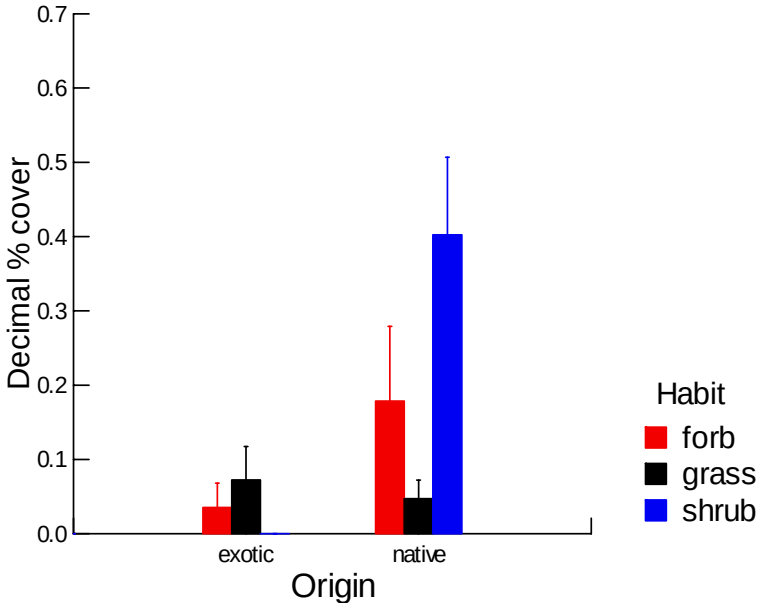


Figure 13. Average (+/- 1 s.e.) total percent cover for six coastal sage scrub plots in City of Carlsbad Open Space properties. Cover generated from point-intercept utilizing 50m transects at ½ m interval for 98 total points per transect.

Figure 14. Dominant exotic and native species within the CSS Plots.

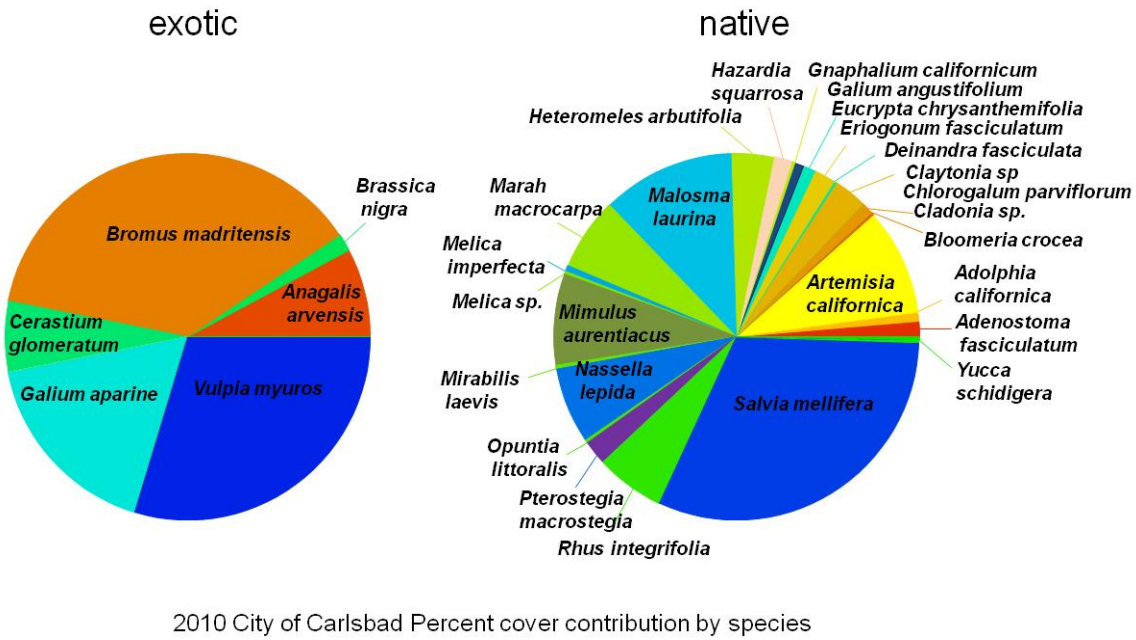


Table 6. Average percent cover of plant groups within the CSS plots.

	Exotic Forb	Exotic Grass	Native Forb	Native Grass	Native Shrub
Minimum Percent Cover	0	0	0	0	8.1
Maximum Percent Cover	18.2	24.2	56.6	12.1	65.7
Mean	3.5	7.2	17.8	4.7	40.2
Standard Deviation	7.2	9.9	22.2	5.5	23.0

IV. HABITAT MAINTENANCE

A. Erosion Control

Last year, CNLM staff observed an erosion problem at the Crossing Golf Course which resulted from the abandonment and lack of maintenance of a road many years ago. The road was on a steep slope. Over the years, water has eroded the slope and the soil ran off the side of the hill onto the road and trail below (Photograph 1). There was little vegetation on the slope to contain the soil. CNLM, with the help of HRS, Inc, had 500 gravel bags installed at various locations along the road and slope. In addition, several large water bars were graded into the slope to divert water at the top of the slope (Photographs 2-5). This activity occurred in March of 2010 and helped reduce additional erosion from the heavy rains which followed.

Additional erosion control included the cleaning the browditch that runs almost the entire length of the canyon at the La Costa Romeria site (Photograph 6). The ditch had become almost completely full of debris and was not functioning. We also installed about 10 chevrons of gravel bags on each side of the ditch (Photograph 7). Timing of this project could not have been better as the heavy rains produced lots of runoff and could have caused quite a bit of unwanted erosion. Silt accumulated to the top of many of the chevrons, but minimal silt was lost or eroded downstream.

Lastly, following the olive tree removal at the Batiquitos Drive site, CNLM had a number of straw wattles installed and had the lower slopes hydroseeded for erosion control. These measures held up nicely in the heavy rain year of 2010, with little or no debris eroding onto the road below.

Photograph 1. Erosion in abandoned road at the Crossing Golf Course prior to erosion control measures being implemented.

Photograph 2. Erosion control gravel bags near top of old road at the Crossings Golf Course.

Photograph 3. Water bars and erosion control bags near top of slope near the Crossings Golf Course.

Photograph 4. Erosion control measures at the Crossings Golf Course.

Photograph 5. Erosion control measures at the bottom of the abandoned road at the Crossings Golf Course.

Photograph 6. Clean browditch (and dead ice plant) at La Costa Romeria.

Photograph 7. Gravel bag Chevron at La Costa Romeria.

B. Nonnative Plant Removal

The primary habitat maintenance activities for the first three years of management are two remove many nonnative tree species, such as Olive (*Olea europaea*) and Eucalyptus (*Eucalyptus* spp.), as well as pampas grass (*Cortaderia* spp.), tamarisk (*Tamarix* spp.), and palm trees (*Phoenix canariensis*) from a number of the City's properties (see Chapter 5 of the PMP for complete list by each property). However, removing tree species requires that these activities occur outside the breeding season of the CAGN and other sensitive species. Therefore, many of these activities occurred in the fall of 2009 and early winter of 2010.

The following is a list of species that were treated or removed from October 1, 2009 to September 30, 2010 (see photographs 8-14):

- About 25 castor bean (*Ricinis communis*), 3,620 fennel (*Foeniculum vulgare*), 190 Artichoke thistle (*Cynara cardunculus*), 11 tamarisk, 30 pampas, 6 Spanish bayonet (*Yucca* spp.), 5 acacia trees (*Acacia* spp.), 2 olives, 10 Red Natal grass (*Melinus repens*), 9 tree tobacco (*Nicotiana glauca*), 1 Brazilian-pepper (*Schinus terebinthifolius*), 1 silk oak (*Grevillea robusta*), 1 juniper (*Juniperus* spp.), and various other species at Lake Calavera were treated with herbicide. Seed/stalks from about 500 Sahara mustard (*Brassica tournefortii*) individuals were bagged and carted off-site.

- About 1.3 acres of fennel and an additional 790 fennel clumps, 21 Pampas, and 10 tree tobacco were treated at Carlsbad Village Drive.
- About 10 fennel, 120 tree tobacco, and about 48 olive trees, which re-sprouted from last year's removal efforts were retreated at Batiquitos Drive.
- About 10 pampas grass were treated at Los Monos.
- About 1.5 acres of fennel and an additional 1,200 fennel clumps, 1.8 acres of ice plant (*Carpobrotus* spp.), 6 castor bean, 16 tamarisk, 51 pampas, 9 Spanish bayonet, 13 acacia, 80 tree tobacco, 3 palms, 2 myoporum (*Myoporum laetum*), 2 African lily (*Agapanthus* spp.), 2 fountain grass (*Pennisetum setaceum*), and roughly 1,000 black mustard (*Brassica nigra*) were treated at the Crossings Golf Course. Approximately 5 acres of black mustard were also treated.
- About 20 Eucalytpus trees were stumped sprayed at Veterans Park, and about 25 Eucalyptus and acacia trees were removed at Carlsbad Village Drive
- About 130 fennel and 14 tree tobacco were treated at Veterans Park as well as a few pampas along Faraday Avenue.
- Scattered ice plant and about 140 fennel clumps were treated at La Costa/Romeria
- About 40 African corn flag (*Chasmanthe floribunda*) were treated at La Costa Canyon Park.
- About 240 calla lily (*Zantedeschia aethiopica*), 4 pampas, and 1 castor bean were treated at Poinsettia Park. Additionally, 4 Eucalyptus trees were drilled and filled with herbicide and 10 acacia trees were removed and about 10 were trimmed back.
- About ½ acre of acacia was removed at La Costa Romeria street (Photographs 8 and 9).
- About 5 acres of black mustard (*Brassica nigra*) were mowed at the Crossings Golf Course.
- 10 large pepper trees, two clumps of arundo, about 1/10 of an acre of ice plant, 5 palms and various other species were treated or removed from the Carrillo Ranch site.

Photograph 8. Acacia at La Costa Romeria prior to removal.

Photograph 9. Area where acacia was removed at La Costa Romeria.

Photograph 10. Olive trees at Batiquitos Drive prior to removal.

Photograph 11. Olive tree stumps and erosion control at Batiquitos Drive.

Photograph 12. Acacia at Poinsettia Park prior to removal or trim back.

Photograph 13. Acacia removal area at Poinsettia park.
Note that Eucalytpus on left side of picture was trimmed up too.

Photograph 14. Areas where pepper trees were removed at Carrillo Ranch.

C. Preserve Threats

The primary threats to the City's Preserve are all the unwanted and unallowed activities that occur at Lake Calavera, and invasive nonnative plant species (see Section V for additional information). CNLM Rangers spend about 12-16 hours per week at Lake Calavera. Rules for site use by the public were agreed upon by City staff in May of 2009 and signs were posted in June 2009, which has helped educated visitors. We have observed far fewer unwanted activities during the last year than in our first year of management. Although dirt bikers did create a few jumps, we were able to talk to them and most of the illegal jump creation ceased soon afterward. Damages to the property from such activities were far lower than the previous year. Ranger patrols have helped reduce many of unwanted activities that were observed last year. Activities such as air soft games, motorcycle riding, and the use of radio control planes and cars were either not observed or rarely observed. Fishing and swimming were still popular in the Lake, but far less than last year for the latter use. CNLM staff removed the main rope swing from an oak tree on the southern shoreline which has helped reduce swimming activity. The most significant issue was the harassment of users by a knife wielding individual (only one day was reported). The police and CNLM rangers tried to find this individual, but were unsuccessful. Mountain bikers have been respectful of the new trails and have reduced their damages compared to previous years. Minimal unwanted trail creation was observed.

For the most part, no major unwanted activities were observed on the other properties. In mid spring, an individual drove a 4x4 truck onto the La Costa Romeria site and got stuck in the mud

(Photograph 15). The Police cited the individual and he was forced to remove his vehicle. There were no major damages to the property as a result of this event.

Photograph 15. Truck stuck at La Costa Romeria. The driver was cited for trespass.

V. PUBLIC SERVICE

CNLM public service activities during this fiscal year included patrolling, public outreach projects, and public education.

A. Patrolling and Enforcement

Primary patrolling activities occurred at Lake Calavera, as discussed in the previous "threats" section of this report. The Lake Calavera area has been used for many years for recreational purposes and since it lacked any formal trail or rule system in the past, these activities were never kept in check. As a result, the Lake property has had many unwanted trails and habitat damage throughout it. CNLM patrols and signs have "gotten the word out" that these unwanted activities will no longer be tolerated. Most users have been adapting to the new rules, and many unwanted activities have been reduced. The continued development of the formal trail system will help contain their use of the property and help protect the resources.

Routine patrols of the other Properties occurred every month or quarter, or as needed. Other than the aforementioned vehicle which drove onto the La Costa Romeria site, no major incidents were observed.

B. Public Outreach and Projects and Public Education

As part of outreach efforts for the Preserve and CNLM's other properties in Carlsbad, CNLM staff attended the HMP annual meeting and provided data and information about sensitive species and other Preserve-related issues. CNLM staff also attended several TransNet Environmental Mitigation Program meetings to provide input and listen in on current events. CNLM staff provided input to the meeting about their experiences in Carlsbad and other areas, and tried to illicit interest in getting more enforcement support for the State of California lands located adjacent to Lake Calavera. CNLM staff participated in the Earth Day, San Diego Mountain Biking Association Trial Work Day and National Public Lands Day held at Lake Calavera and hosted by the City's Parks and Recreation Division. CNLM assisted with the days projects (trash pickup, fence installation, trail work, and kiosk installation) and provided a brief summary of the preserve and its resources. CNLM staff also provided assistance for the Pacific Ridge High School trail and habitat restoration project held in the spring.

C. Trails Coordination

In late winter, the City started to develop its trail system and outreach program. The City installed 5 dog waste stations (including bags and trashcans), and 1 large kiosk.

CNLM staff were asked several times to attend meetings or visit Lake Calavera and discuss trail planning issues. We met with the City's trail planner and a representative of the San Diego Mountain Biking Association (SDMBA) to discuss trail projects and trail work days. We also met with City staff to discuss eagle projects on the property. CNLM staff also attended several of the quarterly scheduled trail volunteer meetings to discuss issues and build relationships with City staff and trail volunteers.

D. Signing

The Center installed over 40 signs along the perimeter or key access points of the properties in 2009. Many of these signs were vandalized and replaced as expected. Many of the newly installed signs have not been vandalized. The Center will finish signing Lake Calavera once the fences have been installed.

CNLM installed a total of five mini-kiosks in 2009 and added 4 additional kiosks at Lake Calavera in 2010 (Photograph 16). CNLM also repaired the old Kiosks installed by the Environmental Trust at the main trail heads of Calavera Mountain. A map of each site, a brief narrative of the purpose of the site, and a City- produced brochure entitled "Edge Effects" and/or California Native Plant Society "Don't Plant a Pest" brochure were posted within the kiosk. The narrative also provided City and CNLM contact information.

Photograph 16. Mini-kiosk installed at Lake Calavera.

VI. REPORTING

Reporting activities include report writing, all data analysis, geographic information system (GIS) data gathering, compilation, and analysis, meetings and regional coordination. Data that have been entered into ARCView GIS (9.1) includes preserve boundaries, sensitive plant and animal locations, and vegetation communities.

A. Annual Reports and Work Plans: This report represents the second annual report for the Preserve. CNLM will continue to follow the guidelines of the PMP for the upcoming fiscal year and provide the City of Carlsbad and wildlife agencies a summary of planned activities to occur between October, 2010 and the end of September, 2011.

B. Management Plan: The PMP for the Preserve was completed and approved in September of 2008 and will serve at the management plan for the first three years of management. This document provides background information of the Preserve and provides direction and time lines for future work. It also provides budget and financial information.

C. Budgets/Finances: The total expenditures for management from October 1, 2009 to September 30, 2010 were $165,473.

VII. SUMMARY & DISCUSSION

Management of the City's Preserve this year was successful at protecting the properties from human encroachment, building baseline biological data, removing non-native plants, and developing a better understanding of the Preserve and its regional context. Preserve management in the next year will involve more biological surveys, habitat maintenance, site construction, and public outreach.

VIII. REFERENCES

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IX. Appendices

Appendix 1.

Animal Species Observed in 2009 and 2010

Animal Species Observed (X=2009; XX= 2009 & 2010; Y=2010)

Species	CL	CVD	LM	VP/MC	PP	LL	BD	LCR	LCCP	C-RANCH	CGC	RC
Birds:												
Acorn woodpecker		X										
Allen's hummingbird	Y				XX	Y		X				
American coot	XX											
American crow	X	Y		X	XX	Y	XX	XX	Y	X	X	
American goldfinch			X									
American kestrel	X										X	
American widgeon	X											
Anna's hummingbird	X	XX	X	XX	XX		XX	XX	XX	XX	XX	X
Ash-throated flycatcher	XX				X						X	
Bewick's wren	XX	XX	X	XX	XX		X	XX	XX	X	X	
Black-headed grosbeak	X										XX	
Black phoebe	XX		XX	XX	XX		X	X		X	X	X
Blue grosebeak						Y					Y	
Blue-gray gnatcatcher	XX										Y	
Brown-headed cowbird	X				XX	Y					XX	
Bufflehead	X											
Bullock's oriole	X											
Bushtit	XX	X	XX	XX	XX	X	X	XX	XX	X	XX	
California quail	XX	X	XX	XX	XX						XX	X
California thrasher	XX		XX	X				X	X		XX	X
California towhee	XX	XX	XX	XX	XX	Y	XX	XX	XX	Y	XX	X
Cassin's finch		X	X									
Cassin's kingbird	X								X		Y	
Cliff swallow	X										XX	
Coastal California gnatcatcher	XX	X	XX	XX	X				X		XX	
Common moorhen	X											
Common raven	XX	XX	X		X		X	X	XX		X	
Common yellow-throat	XX	X	X	XX	XX	X		XX		X	XX	
Cooper's hawk	XX	X		Y						X		
Costa's hummingbird	XX										X	
Double-crested cormorant	X											
Downy woodpecker	Y											
Great blue heron (fly-over)	X											
Great egret	X										XX	
Great-tailed grackle	XX							X				

Species	CL	CVD	LM	VP/MC	PP	LL	BD	LCR	LCCP	C-RANCH	CGC	RC
Greater roadrunner			X								X	
Hermit thrust	X											
Hooded oriole	X		X								X	X
House finch	XX	XX		XX	XX	X		Y	XX	X	X	X
House wren	X										X	
Hutton's vireo					X					X		
Killdeer	XX											
Least Bell's vireo											XX	
Lesser goldfinch	XX			XX	XX		X	Y	Y	X	X	
Lincoln's sparrow	X											
Mallard	XX									Y	X	
Mourning dove	XX	X	X	X	XX			XX	XX	X	X	X
Northern flicker			Y					Y				
Northern harrier	XX		X	XX								
Northern mockingbird	XX			X	XX	X	XX		X	Y	XX	X
Northern shoveler	X											
Nuttall's woodpecker	X		Y			X		Y	XX	X	X	
Orange-crowned warbler	XX					X	Y	Y			XX	
Pacific sloped flycatcher	XX										X	
Peacock										X		
Phainopepla	X											
Pied-billed grebe	X											
Poor-whil									Y			
Red-tailed hawk	XX		XX	Y							X	X
Red-winged blackbird	XX										XX	
Ruby-crowned kinglet	X											
Ruddy duck	X											
Rufous hummingbird		X	X									
Rufous-crowned sparrow	X		X									
Says phoebe	X			X					Y			X
Song sparrow	X	X		X	XX		Y	X	X	XX	XX	
Spotted towhee	XX	XX	XX	XX	XX	X	XX		XX	XX	X	X
Tree swallow	X											
Turkey vulture (fly-over)	X										X	
Violet-green swallow				X								
Western kingbird		X	Y				X	X	X		X	
Western meadowlark				X								

Species	CL	CVD	LM	VP/MC	PP	LL	BD	LCR	LCCP	C-RANCH	CGC	RC
Western scrub-jay	XX	X		Y			X	XX	XX	X	X	X
Western tanager										X		
White-crowned sparrow	XX	XX	XX		Y		X		Y		X	X
White-faced ibis (fly-over)	X											
White-tailed kite											X	
White-throated swift (fly-over)	X			Y								
Wilson's warbler	X									X		
Wrentit	XX	XX	XX	X	XX	XX	XX	XX	XX	XX	X	X
Yellow warbler											Y	
Yellow-rumped warbler	XX		X	Y		X	Y	Y	XX	Y	XX	
Yellow-breasted chat					X						XX	
Insects:												
Behr's metalmark				X								
Cabbage white	X			X						X		
Lorquin's admiral											X	
Mourning cloak				X						X		
Painted lady				X						X		
Pygmy blue				X				X				
Sara's orangetip	XX									X		
Scorpion				X								
Sphinx moth				X								
Western tiger swallowtail	X									X		
Mammals:												
Coyote	XX			XX	X			XX	X		X	
Desert cottontail	XX	X	X	XX	X		X	Y	XX	X	X	
Ground squirrel	XX	X		XX	X						X	
Raccoon (tracks)	XX							XY	X	X	X	
Opossum (tracks)	X							Y			X	
Woodrat	Y			XX	XX			XX	XX	X		
Long-tailed weasel								Y				
Reptiles and Amphibians:												
Belding's orange-throated whiptail			X									
Bullfrog	XX											
Gopher snake	Y											

Species	CL	CVD	LM	VP/MC	PP	LL	BD	LCR	LCCP	C-RANCH	CGC	RC
Pacific treefrog	XX			X					XX		X	
Rattlesnake (skin only)	Y			X								
Side-blotched lizard	X			X	XX						X	
Western fence lizard	XX		X	X	XX					X	X	
Western toad											X	

CL=Calavera Lake; CVD=Carlsbad Village Drive; LM=Los Monos; VP/MC=Veterans Park/Macario Canyon; PP=Poinsetta Park; LL=Lagoon Lane; BD=Batiquitos Drive; LCR=La Costa Romero; LCCP=La Costa Canyon Park; C-Ranch=Carrillo Ranch; CGC=Crossings Golf Course ; RC=Research Center

Appendix 2.

Plant species observed in 2010

City of Carlsbad Open Space Plant Species List - 2009-2010

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
LYCOPHYTES											
SELAGINELLACEAE											
Selaginella cinerascens	MESA SPIKE-MOSS	X									X
Selaginella bigelovii	BIGELOW'S SPIKE-MOSS							X	X		
LEPTOSPORANGIATE FERNS											
DRYOPTERIDACEAE - Wood Fern Family											
Dryopteris arguta	COASTAL WOOD FERN						X				
POLYPODIACEAE - Polypody Family											
Polypodium californicum	CALIFORNIA POLYPODY							X			
PTERIDACEAE — Brake Family											
Pentagramma triangularis ssp. *viscosa*	STICKY SILVERBACK FERN										X
Pentagramma triangularis	FERN	X		X					X		X
CONFIERS											
PINACEAE — Pine Family											
Pinus ssp.	PINE		X								
MONOCOTS											
AGAVACEAE — Agave Family											
Yucca schidigera	MOHAVE YUCCA	X		X	X			X	X	X	X
ALLIACEAE — Onion Family											
Allium ssp.	ONION				X						
Allium haematochiton	REDSKIN ONION	X									
AMARYLLIDACEAE — Amaryllis Family											
**Amaryllis belladonna*	BELLADONNA-LILY									X	
ARECACEAE (PALMAE) — Palm Family											
**Washingtonia robusta*	MEXICAN FAN PALM		X			X					
ASPARAGACEAE - Asparagus Family											
**Asparagus asparagoides*	FLORISTS SMILAX			X				X			
CYPERACEAE — Sedge Family											
Carex triquetra	TRIANGULAR-FRUIT SEDGE	X			X						
**Cyperus ssp.*	UMBRELLA PLANT		X	X				X			
Cyperus eragrostis	TALL FLATSEDGE		X							X	X
**Cyperus involucratus*	AFRICAN UMBRELLA PLANT		X							X	
Eleocharis aciculatus	NEEDLE SPIKE-RUSH		X								
Schoenoplectus americanus	OLNEY'S BULRUSH		X								

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Schoenoplectus californicus	CALIFORNIA BULRUSH		X			X					
Schoenoplectus pungens	COMMON THREESQUARE					X					
HYACINTHACEAE — Hyacinth Family											
Chlorogalum parviflorum	SOAP-PLANT/AMOLE	X	X		X						
Chlorogalum pomeridianum var. *pomeridianum*	WAVY-LEAF SOAP-PLANT/AMOLE								X		
IRIDACEAE — Iris Family											
**Chasmanthe floribunda*	AFRICAN CORNFLAG		X			X					
Sisyrinchium bellum	BLUE-EYED-GRASS	X	X		X		X				
JUNCACEAE — Rush Family											
Juncus acutus ssp. *leopoldii*	SOUTHWESTERN SPINY RUSH		X								
Juncus arcticus var. *mexicanus*	MEXICAN RUSH					X					
Juncus bufonius	TOAD RUSH										X
LILIACEAE — Lily Family											
Calochortus weedii var. *weedii*	WEED'S MARIPOSA LILY	X									
Calochortus splendens	SPLENDID MARIPOSA LILY	X									
MELANTHIACEAE — Bunch Flower or Camas Family											
Zigadenus fremontii	FREMONT'S CAMAS	X	X								
POACEAE (GRAMINEAE) — Grass Family											
Achnatherum coronatum	GIANT STIPA	X									X
Agrostis pallens	SEASHORE BENTGRASS										X
**Agrostis viridis*	WATER BENT									X	
**Arundo donax*	GIANT REED					X					
***Avena barbata*	SLENDER WILD OAT	X			X	X		X	X	X	X
**Avena fatua*	WILD OAT							X			
Bothriochloa barbinodis	CANE BLUESTEM		X		X			X			
**Brachypodium distachyon*	PURPLE FALSEBROME	X	X		X	X		X			
**Bromus diandrus*	RIPGUT GRASS	X	X		X	X		X		X	X
**Bromus hordeaceus*	SOFT CHESS	X	X			X		X		X	X
**Bromus madritensis* ssp. *rubens*	FOXTAIL CHESS, RED BROME	X	X	X	X	X		X	X	X	X
**Cortaderia selloana*	SELLOA PAMPAS GRASS	X		X			X	X	X		X
Distichlis spicata	SALTGRASS					X		X			
**Ehrharta erecta*	PANIC VELDT GRASS									X	
**Gastridium ventricosum*	NIT GRASS	X			X			X			X
**Hordeum spp.*	BARLEY	X									
**Hordeum marinum*	MEDITERANEAN BARLEY							X			
**Lamarckia aurea*	GOLDEN-TOP										X
Leymus condensatus	GIANT WILD-RYE	X	X	X	X	X					
**Lolium multiflorum*	ITALIAN RYEGRASS		X		X			X			
Melica imperfecta	COAST RANGE MELIC	X	X						X		X
**Melinis repens*	NATAL GRASS									X	X
Muhlenbergia microsperma	LITTLE-SEED MUHLY	X									X
Nassella lepida	FOOTHILL NEEDLEGRASS	X	X		X		X				X

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Nassella pulchra	PURPLE NEEDLEGRASS	X	X		X	X		X			X
**Paspalum dilatatum*	DALLIS GRASS					X					
Paspalum distichum	COMMON KNOTGRASS		X								
**Pennisetum setaceum*	AFRICAN FOUNTAIN GRASS									X	X
**Phalaris aquatica*	HARDING GRASS					X					
**Phalaris canariensis*	CANARY GRESS								X		
**Phalaris minor*	LITTLE-SEED CANARY GRASS										X
**Piptatherum miliaceum*	SMILO GRASS		X			X					
**Poa annua*	ANNUAL BLUEGRASS	X									
**Polypogon monspeliensis*	ANNUAL BEARD GRASS		X		X	X		X	X		X
**Schismus* spp.	SCHISMUS	X				X					
**Schismus barbatus*	MEDITERANEAN SCHISMUS							X			X
Vulpia microstachys	FESCUE		X		X				X		
**Vulpia myuros* var. *myuros*	RAT-TAIL FESCUE	X			X			X	X	X	X
Vulpia octoflora	SLENDER FESCUE	X						X			X
THEMIDACEAE — Brodiaea Family											
Bloomeria crocea var. *crocea*	COMMON GOLDENSTAR	X			X			X			
Dichelostemma capitatum ssp. *capitatum*	BLUE DICKS	X	X	X	X			X			X
EUDICOTS											
ADOXACEAE — Adoxa Family											
Sambucus mexicana	BLUE ELDERBERRY	X	X	X	X	X		X	X	X	X
AIZOACEAE — Fig-Marigold Family											
**Carpobrotus chilensis*	SEA-FIG					X					
**Carpobrotus edulis*	HOTTENTOT-FIG				X				X		
**Mesembryanthemum crystallinum*	CRYSTALLINE ICEPLANT	X							X		
AMARANTHACEAE - Amaranth Family											
Atriplex sp.	SALTBUSH							X			
**Atriplex semibiccata*	AUSTRALIAN SALTBUSH							X			X
**Amaranthus albus*	WHITE TUMBLEWEED	X	X	X	X	X		X			
Chenopodium spp.	GOOSEFOOT					X					
**Chenopodium album*	LAMB'S QUARTERS										X
**Chenopodium murale*	NET-LEAF GOOSEFOOT								X		
**Dysphania ambrosioides*	MEXICAN TEA	X	X	X	X						
**Salsola tragus*	PRICKLY RUSSIAN-THISTLE, TUMI	X	X	X				X			
Sarcoconia pacifica	PACIFIC PICKLEWEED				X						
ANACARDIACEAE - Sumac or Cashew Family											
Malosma laurina	LAUREL SUMAC	X	X	X	X	X	X		X	X	X
Rhus integrifolia	LEMONADEBERRY	X	X	X	X	X	X	X	X	X	X
**Schinus terebinthifolius*	BRAZILIAN PEPPER TREE		X		X			X		X	
Toxicodendron diversilobum	WESTERN POISON-OAK	X				X					X

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
APIACEAE (UMBELLIFERAE) — Carrot Family											
Apiastrum angustifolium	MOCK-PARSLEY	X	X		X			X			
**Apium graveolens*	COMMON CELERY		X			X					
**Conium maculatum*	COMMON POISON HEMLOCK			X		X		X	X	X	
Daucus pusillus	RATTLESNAKE WEED	X	X		X			X	X	X	X
**Foeniculum vulgare*	SWEET FENNEL	X	X	X	X	X		X	X		X
Sanicula arguta	SHARP TOOTH SANICLE			X	X						
APOCYNACEAE — Dogbane Family											
Asclepias fascicularis	NARROW-LEAF MILKWEED							X			
**Vinca major*	GREATER PERIWINKLE			X		X					
ARACEAE — Arum/Duckweed Family											
**Zantedeschia aethiopica*	CALLA-LILY			X							
ASTERACEAE (COMPOSITAE) — Sunflower Family											
Amblyopappus pusillus	PINEAPPLE WEED	X									
Ambrosia psilostachya	WESTERN RAGWEED	X							X		
Ancistrocarphus filagineus	WOOLLY FISHHOOKS			X							
Artemisia californica	COASTAL SAGEBRUSH	X	X	X	X	X		X	X	X	X
Artemisia douglasiana	DOUGLAS MUGWORT		X			X				X	
Baccharis pilularis	CHAPARRAL BROOM, COYOTE BR	X	X	X	X	X		X	X	X	X
Baccharis salicifolia	MULE-FAT, SEEP-WILLOW	X	X	X	X	X		X		X	X
Baccharis sarothroides	BROOM BACCHARIS				X						X
Brickellia californica	CALIFORNIA BRICKELLBUSH		X								X
**Carduus pycnocephalus*	ITALIAN THISTLE		X	X		X		X			X
**Centaurea melitensis*	TOCALOTE	X	X	X	X	X		X	X	X	X
Chaenactis artemisiifolia	WHITE PINCUSHION										X
Chaenactis glabriuscula	PINCUSHION	X		X							X
**Chrysanthemum coronarium*	CROWN MARIGOLD		X					X		X	
Cirsium occidentale var. *occidentale*	COBWEBBY THISTLE	X							X	X	
Conyza canadensis	HORSEWEED	x	X	X	X	X			X	X	X
Corethrogyne filaginifolia var. *californica*	CALIFORNIA SAND-ASTER	X			X						
**Cotula australis*	AUSTRALIAN BRASS-BUTTONS			X					X		X
**Cotula coronopifolia*	AFRICAN BRASS-BUTTONS		X			X		X			
Deinandra fasciculata	FASCICLED TARWEED	X	X	X	X	X		X		X	X
Encelia californica	CALIFORNIA ENCELIA	X	X	X	X	X		X	X		X
Encelia farinosa	BRITTLEBUSH							X			X
Eriophyllum confertiflorum var. *confertiflorum*	LONG-STEM GOLDEN-YARROW	X	X	X	X	X		X	X		X
Filago arizonica	ARIZONA FILAGO	X						X			
**Filago gallica*	NARROW-LEAF FILAGO	X	X	X	X	X		X			
**Gazania* spp.	GAZANIA				X						
Gnaphalium californicum	CALIFORNIA EVERLASTING	X	X	X	X	X	X	X	X		X
Gnaphalium ramosissiumum	PINK EVERLASTING				X						
Gnaphalium stramineum	COTTON-BATTING PLANT	X	X	X	X	X	X	X	X	X	X

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Grindelia camporum	RAYLESS GUMPLANT	X			X						
Hazardia squarrosa var. *squarrosa*	SAWTOOTH GOLDENBUS	X	X	X	X			X	X	X	X
**Hedypnois cretica*	CRETE HEDYPNOIS	X	X		X	X		X		X	
Hesperevax sparsiflora var. *sparsiflora*	ERECT EVAX	X						X			
Heterotheca grandiflora	TELEGRAPH WEED	X			X					X	X
**Hypochaeris glabra*	SMOOTH CAT'S EAR	X	X		X						X
Isocoma menziesii var. *menziesii*	SPREADING GOLDENBUSH	X	X		X			X			
Isocoma menziesii var. vernonioides	COASTAL GOLDENBUSH				X	X		X			X
Iva hayesiana	SAN DIEGO MARSH-ELDER		X								
**Lactuca serriola*	PRICKLY LETTUCE		X		X						X
Lasthenia gracilis	COMMON GOLDFIELDS	X									
Mircoseris douglasii var. playcarpha	SMALL FLOWERED MICROSERIS		X								
Osmadenia tenella	OSMADENIA	X									
Pentachaeta aurea	GOLDEN-RAY PENTACHAETA	X									
**Picris echioides*	BRISTLY OX-TONGUE	X	X		X	X	X	X			
Pluchea odorata	SALT MARSH FLEABANE		X		X	X					
Porophyllum gracile	ODORA										X
Pseudognaphalium beneolens	FRAGRANT EVERLASTING		X		X	X					
Pseudognaphalium biolettii	BICOLOR CUDWEED	X	X		X	X		X	X		X
Pseudognaphalium microcephalum	WHITE EVERLASTING										X
Senecio californicus	CALIFORNIA BUTTERWEED	X									
**Senecio linearifolius* var. *linearifolius*	FIREWEED				X						
**Senecio vulgaris*	COMMON GROUNDSEL						X	X			X
**Silybum marianum*	MILK THISTLE							X		X	
**Sonchus asper* ssp. *asper*	PRICKLY SOW-THISTLE	X	X		X	X	X	X	X		X
**Sonchus oleraceus*	COMMON SOW-THISTLE	X	X		X					X	X
Stephanomeria sp.	WREATH-PLANT	x	X	X	X			X			X
Stylocline gnaphaloides	EVERLASTING NEST-STRAW	X	X		X						X
Xanthium strumarium	COCKLEBUR		X					X			X
Uropappus lindleyi	SILVER PUFFS				X						
Viguiera laciniata	SAN DIEGO SUNFLOWER										X
BETULACEAE — Birch Family											
Alnus rhombifolia	WHITE ALDER									X	
BORAGINACEAE — Borage Family											
Amsinckia menziesii var. *intermedia*	RANCHER'S FIDDLENECK	X		X					X		
Cryptantha clevelandii ssp. clevelandii	CLEVELAND'S CRYPTANTHA	X									
Criptantha clevelandii ssp. unknown	CLEVELAND'S CRYPTANTHA							X			
Cryptantha micromeris	MINUTE-FLOWER CRYPTANTHA						X				X
Cryptantha intermedia	NIEVITAS CRYPTANTHA	X	X	X	X		X				X
Cryptantha microstachys	TEJON CRYPTANTHA	X									
Cryptantha muricata	PRICKLY CRYPTANTHA										X

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
*Echium candicans	PRIDE OF MADEIRA		X		X						
Harpagonella palmeri	PALMER'S GRAPPLING-HOOK	X	X								
Heliotropium curassavicum	SALT HELIOTROPE		X		X						
*Myosotis discolor	FORGET-ME-NOT								X		
Pectocarya linearis ssp ferrocula	SLENDER PECTOCARYA	X	X								
Pectocarya peninsularis	PENINSULAR PECTOCARYA										X
Plagiobothrys collinus var. gracilis	SAN DIEGO POPCORNFLOWER	X	X								X
BRASSICACEAE (CRUCIFERAE) — Mustard Family											
*Brassica nigra	BLACK MUSTARD	X	X	X	X	X		X	X	X	X
*Brassica tournefortii	SAHARAN MUSTARD								X		X
Cardamine oligosperma	IDAHO BITTERCRESS								X		
*Coronopus didymus	LESSER WART-CRESS	X	X				X				
Descurania pinnata	TANSY MUSTARD	X									
*Hirschfeldia incana	SHORT-POD MUSTARD	X									X
Lepidium nitidum var. nitidum	SHINING PEPPERGRASS	X	X		X						
*Lobularia maritima	SWEET ALYSSUM		X	X							
*Raphanus sativus	WILD RADISH	X	X	X	X	X		X			X
Rorippa nasturtium-aquaticum	WATER-CRESS		X	X		X					
*Sisymbrium orientale	HARE'S-EAR CABBAGE			X							
CACTACEAE — Cactus Family											
Cylindropuntia prolifera	COAST CHOLLA	X						X	X		
*Opuntia ficus-indica	MISSION PRICKLY-PEAR, INDIAN-F	X		X					X		
Opuntia littoralis	COAST PRICKLY-PEAR	X	X	X	X	X		X	X	X	X
CAMPANULACEAE - Bellflower Family											
Triodanis biflora	SMALL VENUS LOOKING-GLASS	x							X		X
CAPPARACEAE — Caper Family											
Isomeris arborea	BLADDERPOD	X		X	X	X		X			
CAPRIFOLIACEAE - Honeysuckle Family											
Lonicera subspicata	HONEYSUCKLE			X	X	X					
CARYOPHYLLACEAE — Pink Family											
Cardionema ramosissima	TREAD LIGHTLY	X									
*Cerastium glomeratum	MOUSE-EAR CHICKWEED	X									X
Polycarpon depressum	CALIFORNIA POLYCARP	X			X			X			X
*Polycarpon tetraphyllum ssp. tetraphyllum	FOUR-LEAF ALLSEED					X	X		X		
*Silene gallica	COMMON CATCHFLY	X	X					X			X
Silene laciniata ssp. laciniata	SOUTHERN PINK				X						X
Spergularia salina	SALT MARSH SAND-SPURRY				X						
*Stellaria media	COMMON CHICKWEED	X									
CISTACEAE — Rock-Rose Family											
Helianthemum scoparium	PEAK RUSH-ROSE	X					X				X
CONVOLVULACEAE — Morning-Glory Family											

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Calystegia macrostegia	MORNING-GLORY	X	X	X	X			X	X		X
Convolvulus simulans	SMALL-FLOWERED MORNING GLORY				X			X			
Cuscuta spp.	DODDER	X									
Dichondra occidentalis	WESTERN DICHONDRA/PONYFOOT	X									
CRASSULACEAE — Stonecrop Family											
Crassula connata	PYGMYWEED	X	X	X	X		X	X	X		X
Dudleya edulis	LADIES' FINGERS		X								
Dudleya lanceolata	LANCE-LEAF DUDLEYA	X	X						X		X
Dudleya pulverulenta	CHALK DUDLEYA	X	X								X
Dudleya viscida	STICKY DUDLEYA		X								
CUCURBITACEAE — Gourd Family											
Marah macrocarpus var. *macrocarpus*	MANROOT, WILD-CUCUMBER	X	X	X	X		X	X	X	X	X
ERICACEAE — Heath Family											
Arctostaphylos glandulosa ssp. *glandulosa*	EASTWOOD MANZANITA						X				
Comarostaphylis diversifolia ssp. *diversifolia*	SUMMER-HOLLY		X		X		X				
Xylococcus bicolor	MISSION MANZANITA	X		X	X		X		X	X	X
EUPHORBIACEAE — Spurge Family											
Chamaesyce albomarginata	WHITE-MARGIN SANDMAT	X	X								
**Chamaesyce maculata*	SPOTTED SPURGE	X	X	X	X	X					
Chamaesyce polycarpa	SMALL-SEED SANDMAT							X	X		X
Croton californicus	CALIFORNIA CROTON			X	X						
**Euphorbia peplus*	PETTY SPURGE		X	X	X			X		X	X
***Ricinus communis*	CASTOR BEAN										X
FABACEAE (LEGUMINOSAE) - Legume Family											
**Acacia spp.*	ACACIA			X				X			
Astragalus didymocarpus var. didymocarpus	WHITE DWARF LOCOWEED	X	X								
Astragalus trichopodus var. longus	OCEAN LOCOWEED							X			
Lotus hamatus	LOTUS	X	X		X			X			
Lotus scoparius	DEERWEED	X	X	X	X	X	X	X	X	X	X
Lotus strigosus	BISHOP'S/STRIGOSE LOTUS	X									
Lupinus bicolor	MINIATURE LUPINE	X	X		X				X		
Lupinus hirsutissimus	STINGING LUPINE	X									
Lupinus truncatus	COLLAR LUPINE										X
Lupinus succulentus	ARROYO LUPINE				X			X			
**Medicago polymorpha*	CALIFORNIA BURCLOVER	X		X	X			X			
**Melilotus albus*	WHITE SWEET CLOVER		X								
**Melilotus indicus*	INDIAN SWEET CLOVER		X	X	X			X		X	X
Vicia ludoviciana var. ludoviciana	DEER PEA VETCH	X									
FAGACEAE — Oak Family											
Quercus agrifolia var. *agrifolia*	COAST LIVE OAK, ENCINA	X	X	X		X					X
Quercus dumosa	NUTTALL'S SCRUB OAK	X	X		X		X				
GENTIANACEAE — Gentian Family											

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Centaurium venustum	CANCHALAGUA	X	X		X						X
GERANIACEAE — Geranium Family											
**Erodium botrys*	LONG-BEAK FILAREE/STORKSBILL	X			X			X			X
**Erodium cicutarium*	RED-STEM FILAREE/STORKSBILL	X	X		X	X		X	X	X	X
**Erodium moschatum*	WHITE-STEM FILAREE/STORKSBILL								X	X	
Geranium carolinianum	CAROLINA GERANIUM				X				X		
GROSSULARIACEAE — Gooseberry Family											
Ribes indecorum	WHITE-FLOWER CURRANT										X
Ribes speciosum	FUCHSIA-FLOWER GOOSEBERRY	X			X	X					
HYDROPHYLLACEAE — Waterleaf Family											
Eriodictyon crassifolium var. *crassifolium*	FELT-LEAF YERBA SANTA			X						X	
Eucrypta chrysanthemifolia var. chrysanthemifolia	COMMON EUCRYPTA	X	X	X	X				X	X	X
Nemophilla sp.	BLUE EYES	x								X	
Phacelia cicutaria var. *hispida*	CATERPILLAR PHACELIA	X									
Phacelia grandiflora	GIANT-FLOWER PHACELIA				X						
Pholistoma auritum	FIESTA FLOWER	X									
LAMIACEAE (LABIATAE) — Mint Family											
**Marrubium vulgare*	HOREHOUND	X									
Salvia apiana	WHITE SAGE							X			X
Salvia columbariae	CHIA	X					X				X
Salvia mellifera	BLACK SAGE	X	X	X	X	X	X	X	X	X	X
Scutellaria tuberosa	DANNY'S SKULLCAP	x									
Stachys ajugoides var. *rigida*	WHITE HEDGE-NETTLE				X			X			
LYTHRACEAE — Loosestrife Family											
**Lythrum hyssopifolia*	GRASS POLY	X	X								
MALVACEAE — Mallow Family											
Malacothamnus fasciculatus	CHAPARRAL BUSHMALLOW	X	X	X	X					X	X
**Malva parviflora*	CHEESEWEED					X					
Sidalcea malveflora ssp. *sparsifolia*	CHECKER-BLOOM							X			
MYRTACEAE — Myrtle Family											
**Eucalyptus globulus*	BLUE GUM	X	X							X	
NYCTAGINACEAE — Four O'clock Family											
Mirabilis laevis	COASTAL WISHBONE PLANT	X	X		X			X	X		X
OLEACEAE — Olive Family											
**Fraxinus uhdei*	SHAMAL ASH					X					
**Olea europaea*	OLIVE								X		
ONAGRACEAE — Evening-Primrose Family											
Camissonia spp.	SUN CUP	X			X						
Camissonia bistorta	SUN CUP	X	X								X
Camissonia ignota	JURUPA HILLS SUN CUP								X	X	X
Epilobium canum	CALIFORNIA FUCHSIA, ZAUSCHNERIA		X			X					
Epilobium ciliatum ssp. *ciliatum*	WILLOW HERB		X								

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
Oenothera elata	GREAT MARSH EVENING-PRIMROSE		X	X							
OROBANCHACEAE — Broom-Rape Family											
Castilleja exserta	PURPLE OWL'S CLOVER	X									
Castilleja foliolosa	WOOLLY INDIAN PAINTBRUSH	X									
Cordylanthus rigidus ssp. *setigerus*	DARK-TIP BIRD'S BEAK	X									X
OXALIDACEAE — Oxalis Family											
**Oxalis pes-caprae*	BERMUDA-BUTTERCUP		X	X				X			
Oxalis albicans ssp. *californica*	CALIFORNIA WOOD-SORREL							X			
PAPAVERACEAE — Poppy Family											
Eschscholzia californica	CALIFORNIA POPPY	X	X					X	X		
PHRYMACEAE — Hopseed Family											
Mimulus aurantiacus var. *puniceus*	MONKEY FLOWER	X	X	X	X	X	X	X	X	X	X
Mimulus pilosus	DOWNY MONKEYFLOWER										X
PITTOSPORACEAE — Pittosporum Family											
**Pittosporum undulatum*	VICTORIA-BOX									X	
PLANTAGINACEAE — Plantain Family											
Antirrhinum kellogii	CLIMBING SNAPDRAGON	X					X				
Antirrhinum nuttallianum ssp. *nuttallianum*	NUTTALL'S SNAPDRAGON	X	X		X		X				X
Antirrhinum nuttallianum ssp. *subsessile*	BIG-GLAND NUTTALL'S SNAPDRAGON								X		
Linaria canadensis	LARGE BLUE TOADFLAX	X									X
Plantago erecta	DOT-SEED PLANTAIN	X	X					X			X
**Plantago lanceolata*	ENGLISH PLANTAIN		X								
***Plantago major*	COMMON PLANTAIN		X								
PLATANACEAE — Plane Tree or Sycamore Family											
Platanus racemosa	WESTERN SYCAMORE			X		X					
PLUMBAGINACEAE — Leadwort Family											
Limonium ssp.	MARSH-ROSEMARY				X						
**Limonium perezii*	PEREZ'S MARSH-ROSEMARY		X		X			X			X
POLEMONIACEAE — Phlox Family											
Eriastrum spp.	WOOLY STAR										X
Gilia angelensis	GRASSLAND GILIA	X									
Linanthus dianthiflorus	FARINOSE GROUND PINK	X									
Navarretia hamata	PINCUSHION	X									X
POLYGONACEAE — Buckwheat Family											
Chorizanthe staticoides	TURKISH RUGGING										X
Chorizanthe fimbriata var. *fimbriata*	FRINGED SPINEFLOWER	X									X
Eriogonum fasciculatum var. *fasciculatum*	COAST CALIFORNIA BUCKWHEAT	X	X	X	X	X	X	X	X	X	X
Eriogonum elongatum var. *elongatum*	TALL BUCKWHEAT							X			
Polygonum lapathifolium	WILLOW SMARTWEED									X	
Pterostegia drymarioides	GRANNY'S HAIRNET	X	X	X	X		X	X			X
**Rumex conglomeratus*	WHORLED DOCK		X			X					
**Rumex crispus*	CURLY DOCK	X			X			X			X

Family and Latin Name	Common Name	Property									
		VP/MC	LCCP	PP	LCR	CR	RC	CV	BD	LL	LM
PORTULACACEAE — Purslane Family											
Calandrinia ciliata	RED MAIDS										X
PRIMULACEAE — Primrose Family											
**Anagallis arvensis*	SCARLET PIMPERNEL, POOR MAN'	X	X	X	X	X	X	X	X	X	X
Dodecatheon clevelandii ssp. *clevelandii*	PADRE'S SHOOTING STAR	X	X								
Samolous parviflorus	WATER-PIMPERNEL		X			X					
RANUNCULACEAE — Buttercup Famil											
Clematis ligusticifolia	YERBA DE CHIVA	X	X								
ROSACEAE — Rose Family											
Adenostoma fasciculatum	CHAMISE	X		X	X		X		X	X	X
Cercocarpus minutiflorus	SAN DIEGO MOUNTAIN-MAHOGANY								X		
Heteromeles arbutifolia	TOYON, CHRISTMAS BERRY	X	x	X	X	X	X	X	X	X	X
Prunus ilicifolia ssp. *ilicifolia*	ISLAY, HOLLY-LEAF CHERRY		x			X					
Rubus ursinus	CALIFORNIA BLACKBERRY					X					
RHAMNACEAE — Buckthorn Family											
Adolphia californica	SPINESHRUB	X	x		X						X
Ceanothus verrucosus	WART-STEM-LILAC			X			X		X	X	
Ceonothus tomentosus	RAMONA-LILAC										X
Rhamnus crocea	SPINY REDBERRY		X						X		
RUBIACEAE — Madder or Coffee Family											
Galium angustifolium ssp. *angustifolium*	NARROW-LEAF BEDSTRAW	X	X								X
Galium aparine	COMMON BEDSTRAW, GOOSE GRA	X						X	X		X
SALICACEAE — Willow Family											
Salix gooddingii	GOODDING'S BLACK WILLOW		X	X		X				X	X
Salix laevigata	RED WILLOW									X	
Salix lasiolepis	ARROYO WILLOW		X	X	X	X		X		X	X
SAURURACEAE — Lizard's Tail Family											
Anemopsis californica	YERBA MANSA		X			X					
SAXIFRAGACEAE — Saxifrage Family											
Jepsonia parryi	COAST JEPSONIA	X									
SCROPHULARIACEAE											
Scrophularia californica ssp. *floribunda*	CALIFORNIA BEE PLANT/FIGWORT								X	X	
SOLANACEAE — Nightshade Family											
Datura wrightii	WESTERN JIMSON WEED			X				X			
**Nicotiana glauca*	TREE TOBACCO	X	X	X	X	X		X	X	X	X
Solanum americanum	WHITE NIGHTSHADE							X	X		X
Solanum douglasii	DOUGLAS'S NIGHTSHADE	X		X					X	X	
Solanum parishii	PARISH'S NIGHTSHADE	X		X	X				X	X	X
TAMARICACEAE — Tamarisk Family											
Tamarix spp.	SALTCEDAR				X	X					X
TROPAEOLACEAE — Nasturtium Family											
**Tropaeolum majus*	GARDEN NASTURTIUM		X	X							

Family and Latin Name	Common Name	Property									
		VP/MC	**LCCP**	**PP**	**LCR**	**CR**	**RC**	**CV**	**BD**	**LL**	**LM**
TYPHACEAE — Cattail Family											
Typha ssp.	CATTAIL		X		X	X					
URTICACEAE - NETTLE FAMILY											
Parietaria hespera	PELLITORY	X		X					X	X	
Urtica dioica ssp. *holosericea*	HOARY NETTLE		X	X							
**Urtica urens*	DWARF NETTLE		X	X					X	X	
Hesperocnide tenella	WESTERN NETTLE								X	X	
VERBENACEAE — Vervain Family											
Verbena lasiostachys	VERVAIN							X			
VITACEAE — Grape Family											
Vitis girdiana	DESERT WILD GRAPE										X

* Denotes non-native species

Nomenclature follows: Checklist of the Vascular Plants of San Diego County, 4th Edition. Jon P. Rebman and Michael G. Simpson. 2006

VP/MC=Veterans Park/Macario Canyon; LCCP= La Costa Canyon Park; PP= Poinsettia Park; LCR=La Costa Romeria; CR =Carrillo Ranch; RC=Research Center
CV=Carlsbad Village; BD=Batiquitos Drive; LL=Lagoon Lane; LM=Los Monos.

Appendix 3. CNPS Releve's

Lagoon Lane open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or **Rapid Assessment** (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
LL1 Riparian forest		June 01, 2010	Patricia McConnell

GPS wypt #: ____ GPS name: ____ Datum: ____ or NAD83. Bearing, left axis at SW pt 322 (degrees) of (Long) / Short side

UTME 4 7 1 4 7 8 UTMN 3 6 6 2 9 6 3 Zone: 10 (11) (circle one) Error: ± 3.6 ft / m (pdop)

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance ____ (meters) & bearing ____ (degrees)

Elevation: 14 (ft) / m Camera Name/Photograph #'s: None taken

Stand Size (acres): <1, (1-5), >5 | Plot Size (m^2): 10 / 100 / (400) / 1000 | Plot Shape 13 x 31 ft / (m) or Circle Radius ____ ft / m

Exposure, Actual °: ____ NE NW SE SW (Flat) Variable /All | Steepness, Actual °: ____ (0°) 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower (bottom) | Micro: convex (flat) concave undulating

Geology code: ____ Soil Texture code: ____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 5 BA Stems: 2 Litter: 57 Bedrock: ____ (Incl. outcrops) Boulder: ____ (>60cm diam) Stone: ____ (25-60cm) Cobble: ____ (7.5-25cm) Gravel: ____ (2mm-7.5cm) Fines: 26 (Incl sand, mud) =100%

% Current year bioturbation ____ Past bioturbation present? Y / N | % Hoof punch ____

Site history, stand age, comments: Typical urban drainage. Tunis balls and exotics in understory.

Type/ Level of disturbance codes: 05 / M 08 / M ____ / ____ ____ / ____ ____ / ____ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), (T4) (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), (H2) (>12" ht.) % Non-Vasc cover: 0 Total % Vasc Veg cover: 50

% Cover -Overstory Tree Conifer/Hardwood: ____/____ Low-Medium Tree: 45 Shrub: <1 Herbaceous: 8

Height Class - Overstory Conifer/Hardwood: ____/____ Low-Medium Tree: 05 Shrub: 03 Herbaceous: 02

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
T	Salix lasiolepis	43		H	Polygonum lapathifolium	1	
T	Salix laevigata	2		H	Conyza canadensis	<1	
S	Baccharis salicifolia	<1		H	Cyperus eragrostis	1	✓
H	Bromus diandrus	1		T	Pittosporum undulatum	<1	✓
H	Amaryllis belladonna	<1		H	Anagalis arvensis	<1	
H	marah macrocarpa	<1		H	Tropaeolum majus	<1	
H	Ehrharta erecta	<1		T	Schinus terebinthifolius	<1	
H	Euphorbia peplis	3		S	Eriodictyon crassifolium	<1	
H	Cyperus involucratus	2	✓	H	Agrostis viridis	<1	✓

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H **Explain:** ____

Phenology (E,P,L): Herb P Shrub P Tree P **Other identification or mapping information:**

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: LL1 Riparian forest - lagoon - in open space

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular
% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Conium maculatum	<1		
S	Baccharis pilularis	<1		

Veterans Pk / Macario Canyon - NG/CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

ve or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

r Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
MC01		2.24.10	J. Vinje

GPS wypt #: MC01 GPS name: Trimble Geo XT Datum: ____ or (NAD83) Bearing, left axis at SW pt 20 (degrees) of (Long) / Short side

UTME 624093 6 UTMN 1997287 Zone: 10 / (11) (circle one) Error: ± 21 ft / (m) pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance ____ (meters) & bearing ____ (degrees) SW corner

Elevation: 841 (ft) / m Camera Name/Photograph #'s:

Stand Size (acres): (<1) (1-5) (>5) Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape 20 x 5 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 203 NE NW SE (SW) Flat Variable /All | Steepness, Actual °: 6 0° 1-5° (5-25°) >25°

Topography: Macro: top upper mid (lower) bottom | Micro: convex (flat) concave undulating

Geology code: ____ Soil Texture code: ____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 70 Litter: 20 Bedrock: 0 (Incl. outcrops) Boulder: 0 (>60cm diam) Stone: 0 (25-60cm) Cobble: ____ (7.5-25cm) Gravel: 1 (2mm-7.5cm) Fines: 9 (Incl sand, mud) =100%

% Current year bioturbation 0 Past bioturbation present? Y (N) | % Hoof punch ____

Site history, stand age, comments: Site is a mixture of native grass & disturbed coastal sage scrub. Not sure of historical disturbance, possibly old corral area or farming. Area has been free of farming for a couple of decades though. Many small sprouting Artemisia.

Type/ Level of disturbance codes: 101 H05 H ____ / ____ ____ / ____ ____ / ____ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: (S1) seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), (S4) decadent (>25% dead) * Seedlings & dead shrubs.

Herbaceous: (H1) (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** 0 **Total % Vasc Veg cover:** 120

% Cover -Overstory Tree Conifer/Hardwood: ____ / ____ **Low-Medium Tree:** ____ **Shrub:** 30 **Herbaceous:** 90

Height Class - Overstory Conifer/Hardwood: ____ / ____ **Low-Medium Tree:** ____ **Shrub:** 02 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Opuntia littoralis	2		H	Bromus madritensis rubens	80	
S	Salvia mellifera	1		H	Anagallis arvensis	1	
S	Artemisia californica	2		H	Crassula connata	<1	
S	Solanum parishii	1		H	Didoreiostemma capitatum	<1	
H	Nassella pulchra	15		H	Sonchus oleraceus	<1	
H	Nassella lepida	1		H	Deinandra fasciculata	1	
H	Brassica nigra	3		H	Erodium cicutarium	1	
H	Chlorogalum parviflorum	1		H	Daucus pusillus	<1	
H	Filago gallica	1					

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H **Explain:** ____

Phenology (E,P,L): Herb E **Shrub** E **Tree** ____ **Other identification or mapping information:**

all lrg. shrubs are dead, but many small seedlings

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: MC01

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular

% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Sonchus asper	<1		
H	Vulpia myuros	<1		
H	Bromus hordeaceus	<1		
H	Gastridium venticosum	<1		
H	Pectocarya spp.	<1		

Veterans Pk. / Macrocarpa Canyon - Soquel Chap

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
MCO2		2.24.10	J. Vinje

GPS wypt #: MCO2 GPS name: Trimble Geo XT Datum: ____ or NAD83 Bearing, left axis at SW pt 351 (degrees) of Long / Short side

UTME 624295 UTMN 4199732 Zone: 10 / 11 (circle one) Error: ± 21 ft / m pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees) SW corner

Elevation: 273 ft / m Camera Name/Photograph #'s:

Stand Size (acres): <1 / 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 70 NE NW SE SW Flat Variable /All | Steepness, Actual °: 19 0° 1-5° 5-25° >25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 2 Litter: 10 Bedrock: 0 Boulder: 6 Stone: 2 Cobble: 10 Gravel: 50 Fines: 26 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation <1 Past bioturbation present? Y / N | % Hoof punch ____

Site history, stand age, comments: Site contains a large amount of bare ground-sandstone. This is represented in all the southern maritime chap. on the property, but there is some erosion at this location. A large gully is located in the SE corner of the plot. Very ↓ cover of nonnatives, but some die-back of chemist noticed.

Type/ Level of disturbance codes: 23 / H ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** ____ **Total % Vasc Veg cover:** 40

% Cover -Overstory Tree Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 38 **Herbaceous:** 2

Height Class - Overstory Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 05 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Adenostoma fasciculata	80		H	Salvia columbariae	<1	
S	Salvia mellifera	10		S	Artemisia californica	<1	
S	Yucca schidigera	2		S	mimulus aurantiacus	<1	
S	Helianthemum scoparium	2		H	Nassella lepida	<1	
S	Eriogonum fasciculatum	<1		H	" pulchra	<1	
H	chlorogalum pomeridianum	5		H	Anagallis arvensis	<1	
H	Chorizanthe fimbriata fim.	<1		H	Galium angustifolium	<1	
H	Crassula connata	<1		H	Hypochaeris glabra	<1	
H	Eriophyllum confertiflorum	<1		H	Pterostegia drymarioides	<1	

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: _____

Confidence in alliance identification: L M H **Explain:** _____

Phenology (E,P,L): Herb ____ Shrub ____ Tree ____ **Other identification or mapping information:**

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: MC02

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular
% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Fillago gallica	<1		
H	Pentagramma triangularis	<1		
H	Gnophalium spp.	<1		
H	Antirhinum nuttalianum	<1		
H	Mirabilis lacris	<1		
H	Dudleya lanceolata	<1		
H	Cordylanthus rigidus	<1		
S	Opuntia littoralis	<1		
H	Selaginella spp.	<1		
H	Marah macrocorpus	<1		
S	Rhus integrifolia	<1		
H	Dichelostemma capitatum	<1		
H	Osmadenia tenella	<1		

Veterans Pk / Macario Canyon – CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date: 2·24·10	Name(s) of surveyors (circle recorder):
MC03			J. Vinje

GPS wypt #: MC03 GPS name: Trimble Geo XT Datum: ____ or NAD83. Bearing, left axis at SW pt 350 (degrees) of Long / Short side

UTME 624069 7 UTMN 3997810 Zone: 10 / 11 (circle one) Error: ± 21 ft / m pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance ____ (meters) & bearing ____ (degrees) SW corner

Elevation: 260 (ft) / m Camera Name/Photograph #'s:

Stand Size (acres): (<1) 1-5, >5 | Plot Size (m^2): 10 / 100 / (400) / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 178 NE NW (SE) SW Flat Variable /All | Steepness, Actual °: 10 0° 1-5° (5-25°) >25°

Topography: Macro: top (upper) mid lower bottom | Micro: (convex) flat concave undulating

Geology code: ____ Soil Texture code: ____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 10 Litter: 70 Bedrock: 0 Boulder: 0 Stone: 1 Cobble: 1 Gravel: 8 Fines: 10 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation <1 Past bioturbation present? Y (N) | % Hoof punch ____

Site history, stand age, comments: Site is almost completely dominated by Adolphia californica. Entire stand is like this- very unique. Low levels of disturbance, only some areas comprised of annual, non-native grass.

Type/ Level of disturbance codes: 05 / L ___ / ___ ___ / ___ ___ / ___ ___ / ___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), (S2) young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: (H1) (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** 0 **Total % Vasc Veg cover:** 90

% Cover -Overstory Tree Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 85 **Herbaceous:** 5

Height Class - Overstory Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 03 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Adolphia californica	85		H	Marah macrocarpus	2	
H	Centaurea melitensis	15		H	Apiastrum angustifolium	<1	
H	Dichelostemma capitatum	<1		H	Calochortus spp.	<1	
S	Encelia californica	5		H	Brassica nigra	<1	
S	Yucca schidigera	1/2		H	Erodium cicutarium	<1	
S	Rhus integrifolia			H	Micrabalis lacris	<1	
H	Nassella lepida	5		H	Bromus madritensis	<1	
H	Sonchus oleraceus	<1		H	Encryptochrysanthemifolia	<1	
S	Artemisia californica	5		H	Pterostegia drymarioides	<1	

Unusual species: Adolphia californica

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H Explain: ____

Phenology (E,P,L): Herb ____ Shrub ____ Tree ____ Other identification or mapping information: ____

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: MC03

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular

% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Euphorbia peplus	<1		
S	Opuntia littoralis	<1		
H	Porietenia hespera	<1		

Veterans Pk / Macaio Cnyn - CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
MC04		5.27.10	J. Vinje

GPS wypt #: mc04 GPS name: Trimble Geo Datum: ____ or (NAD83). Bearing, left axis at SW pt 4 (degrees) of Long / Short side

UTME 472018 UTMN 3666397 Zone: 10 / (11) (circle one) Error: ± <1 ft / (m) pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance ____ (meters) & bearing ____ (degrees)

Elevation: 143 (ft) / m Camera Name/Photograph #'s:

Stand Size (acres): <1, (1-5) >5 | Plot Size (m^2): 10 / 100 / (400) / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 255 NE (NW) SE (SW) Flat Variable /All | Steepness, Actual °: 9 0° 1-5° (5-25°) >25°

Topography: Macro: top upper mid (lower) bottom | Micro: (convex) flat concave undulating

Geology code: ____ Soil Texture code: ____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 5 Litter: 83 Bedrock: 0 Boulder: 0 Stone: 1 Cobble: 1 Gravel: 2 Fines: 8 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation <1 Past bioturbation present? Y / (N) | % Hoof punch 0

Site history, stand age, comments: Unsure of age class for community. CSS w/a level of disturbance evidenced by nonnative grass patches. Some dead Salvia shrubs (drought?). Some Artemisia dichacta too. Earlier in season would have captured a higher annual plant ssp. list.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), (S3) mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: (H1) (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** ____ **Total % Vasc Veg cover:** 150-160

% Cover -Overstory Tree Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 75 **Herbaceous:** 80

Height Class - Overstory Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 03 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Salvia mellifera	15		H	Vulpia myuros	40	
S	Artemisia californica	45		H	Anagallis arvensis	1	
S	Rhus integrifolia	8		H	Gnaphalium stramineum	<1	
S	Encelia californica	10		H	Bromus hordeceus	5	
H	Nassella lepida	5		H	Eucryptachyscenthemifolia	<1	
S	Malacothamnus fasciculatus	<1		S	Opuntia littoralis	<1	
H	Brassica nigra	<1		H	Pterostegia drymoides	<1	
H	Bromus madritensis rubens	5		H	Picris echioides	<1	
H	Ambrosia fasciculata	10		H	Baccharis pilularis	<1	

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H **Explain:** ____

Phenology (E,P,L): Herb ____ Shrub ____ Tree ____ **Other identification or mapping information:**

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: MC04

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular
% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Stachys ajugoides rigida	<1		
H	Gnaphalium californicum	<1		
H	Cryptantha clevelandii	<1		
H	Conyza spp.	<1		
H	Apiastrum angustifolium	<1		
H	Sonchus asper	<1		
S	Malosma laurina	<1		
H	Filago arizonica	<1		
H	Erodium cicutarium	<1		

Poinsettia Park - CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

(Relevé) or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	**Final database #:**	**Final vegetation type name:**	**Alliance** ________ **Association**

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	**Air photo:**	**Date:**	**Name(s) of surveyors (circle recorder):**
PP01		5·26·10	J. Vinje

GPS wypt #: PP01 **GPS name:** Trimble Geo XT **Datum:** ____ or (NAD83) **Bearing, left axis at SW pt** 342 **(degrees) of Long / Short side**

UTME 47 11 31 **UTMN** 3 6 6 3 9 1 5 **Zone: 10 / (11)** (circle one) **Error: ±** <1 **ft / (m) / pdop**

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees)

SW corner

Elevation: 136 **(ft) m Camera Name/Photograph #'s:**

Stand Size (acres): <1 / (1-5) / >5 | **Plot Size (m²): 10 / (100) / 400 / 1000 | Plot Shape** 20 x 20 **ft / (m) or Circle Radius** ____ **ft / m**

Exposure, Actual °: 78 **(NE) NW SE SW Flat Variable /All | Steepness, Actual °:** 14 **0° 1-5° (5-25°) > 25°**

Topography: Macro: top upper (mid) lower bottom | Micro: convex flat concave (undulating)

Geology code: ________ **Soil Texture code:** ________ | **(Upland) or Wetland/Riparian** (circle one)

% Surface cover

H20: 0 **BA Stems:** 5 **Litter:** 70 **Bedrock:** 0 **Boulder:** 0 **Stone:** 0 **Cobble:** 0 **Gravel:** 5 **Fines:** 20 **=100%**

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation 0 **Past bioturbation present? Y (N) | % Hoof punch** ____

Site history, stand age, comments: Site appears to have vegetation that is all the same age. Some Artemisia + Baccharis pilularis seedlings present, but most shrubs appear older and are similar in age.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ **"Other"**

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), **(S2 young)** (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: (H1) (<12" plant ht.), **H2** (>12" ht.) **% Non-Vasc cover:** 1 **Total % Vasc Veg cover:** ~~100~~ 80

% Cover -Overstory Tree Conifer/Hardwood: ___/___ **Low-Medium Tree:** ____ **Shrub:** 80 **Herbaceous:** <1

Height Class - Overstory Conifer/Hardwood: ___/___ **Low-Medium Tree:** ____ **Shrub:** 03 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Artemisia californica	95		H	Daucus pusillus	<1	
S	Baccharis pilularis	1		H	Conyza spp.	<1	
H	Marah macrocarpus	<1		H	Sonchus oleraceus	<1	
H	Anagallis arvensis	<1		H	Pentachaeta hespera	<1	
H	Gnaphalium californicum	<1		S	Lotus scoparius	<1	
H	Gnaphalium stramineum	<1		H	Gnaphalium bicolor	<1	
S	Salvia mellifera	<1		N	Moss	<1	
H	Deinandra fasciculata	<1		N	Lichen	<1	
S	Isomeris menziesii	<1					

Unusual species: ________

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ________

Field-assessed association name (optional): ________

Adjacent alliances: ________

Confidence in alliance identification: L M H Explain: ________

Phenology (E,P,L): Herb____ Shrub____ Tree____ Other identification or mapping information:

Poinsettia Park - SWS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
PP02		6.28.10	J. Vinje & too diff. to get to SW corner

GPS wypt #: PP02 GPS name: Trimble Geo Datum: ____ or NAD83. Bearing, left axis at SW pt 218 (degrees) of Long / Short side

UTME 471114.44 UTMN 3667089.19 Zone: 10 / 11 (circle one) Error: ± 21 ft / m pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees) SE corner is closest to the GPS pt. From SE corner, walk 2m in direction of: S 195° W.

Elevation: 189 ft / m Camera Name/Photograph #'s:

Stand Size (acres): 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 40 ft / m or Circle Radius ___ ft / m

Exposure, Actual °: ____ NE NW SE SW Flat Variable /All | Steepness, Actual °: 0° 0° 1-5° 5-25° >25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: ____ Soil Texture code: ____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 10 Litter: 85 Bedrock: 0 (Incl. outcrops) Boulder: 0 (>60cm diam) Stone: 0 (25-60cm) Cobble: 0 (7.5-25cm) Gravel: 0 (2mm-7.5cm) Fines: 5 (Incl sand, mud) =100%

% Current year bioturbation 0 Past bioturbation present? Y (N) | % Hoof punch ____

Site history, stand age, comments: Riparian - southern willow scrub or mixed forest. Portions of this plot include a restoration site. There are old pipes + irrigation heads present. Large, deep gully located in the plot. Likely comes H2O during rain events. No H2O presently.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** 21 **Total % Vasc Veg cover:** 150-200

% Cover -Overstory Tree Conifer/Hardwood: ___ / 90 **Low-Medium Tree:** 100 **Shrub:** 30 **Herbaceous:** 10

Height Class - Overstory Conifer/Hardwood: ___ / 09 **Low-Medium Tree:** 07 **Shrub:** 06 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
T	Salix lasiolepis	80		H	Parietaria hispera	<1	
T	Quercus agrifolia	<1		H	Marah macrocarpus	<1	
T	Platanus racemosa	2		H	Cortaderia selloana	<1	
T/S	Sambucus mexicana	5		H	Asparagus asparagoides	<1	
S	Baccharis pilularis	10		S	Rhus integrifolia	<1	
S	" salicifolia	30		T	Salix goddingii	10	
H	Brassica nigra	<1		H	Soliva douglasii	<1	
H	Urtica dioica	<1		H	Euphorbia peplus	<1	
H	Cardus pycnocephalus	<1		H	Graphalium stramineum	<1	

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H **Explain:** ____

Phenology (E,P,L): Herb ___ Shrub ___ Tree ___ **Other identification or mapping information:**

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: PP02

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular
% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Bromus madritensis ssp. rubens	<1		
N	moss	<1		
H	Conyza spp.	<1		
H	Foeniculum vulgare	<1		
H	Raphanus sativus	<1		

La Costa / Romena St. - CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
LCR01		6.8.10	J. Vinje

GPS wypt #: LCR01 GPS name: Trimble Geo XT Datum: ____ or NAD83. Bearing, left axis at SW pt 28 (degrees) of Long / Short side

UTME 477100 UTMN 3660685 Zone: 10 / 11 (circle one) Error: ± 21 ft / m pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees)

Elevation: 143 ft / m Camera Name/Photograph #'s:

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 15 x 25 ft / m or Circle Radius ___ ft / m

Exposure, Actual °: 111 NE NW SE SW Flat Variable /All | Steepness, Actual °: 21 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 5 Litter: 50 Bedrock: 0 Boulder: 0 Stone: 0 Cobble: 0 Gravel: 2 Fines: 43 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation 21 Past bioturbation present? Y N | % Hoof punch 0

Site history, stand age, comments: coastal sage scrub in fragmented habitat patch. Good habitat w/ little disturbance. a little late in the season to observe all on-site annuals.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** _____ **Total % Vasc Veg cover:** 150

% Cover -Overstory Tree Conifer/Hardwood: ___/___ **Low-Medium Tree:** ___ **Shrub:** 150 **Herbaceous:** 21

Height Class - Overstory Conifer/Hardwood: ___/___ **Low-Medium Tree:** ___ **Shrub:** 03 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Eriogonum californica	80		S	Adolphia californica	2	
S	Salvia mellifera	40		H	Eucryptachrysanthemifolia	21	
H	Nassella lepida	20		H	Eriophyllum confertiflorum	21	
S	Isomeris arborescens	21		H	Sonchus oleraceus	21	
H	Anagallis arvensis	21		S	Artemisia californica	10	
S	Heteromeles arbutifolia	21					
S	Baccharis pilularis	21					
S	Isocoma menziesii	2					
H	Centaurea melitensis	21					

Unusual species: Adolphia californica

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: _____

Confidence in alliance identification: L M H **Explain:** _____

Phenology (E,P,L): Herb___ Shrub___ Tree___ **Other identification or mapping information:** _____

La Costa Canyon Pk - CSS

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
LCCP01		2.17.10	J. Vinje

GPS wypt #: LCCP01 GPS name: Trimble 610 Datum: ____ or NAD83. Bearing, left axis at SW pt ____ (degrees) of Long / Short side

UTME 6257420 UTMN 1978109 Zone: 10 / 11 (circle one) Error: ± 41 ft / m pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees) SW corner

Elevation: 1100 ft / m Camera Name/Photograph #'s:

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 220 NE NW SE SW Flat Variable /All | Steepness, Actual °: 15-30° 1-5° 5-25° >25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: ____ Soil Texture code: ____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 1 Litter: 20 Bedrock: 0 (Incl. outcrops) Boulder: 10 (>60cm diam) Stone: 25 (25-60cm) Cobble: 10 (7.5-25cm) Gravel: 25 (2mm-7.5cm) Fines: 9 (Incl sand, mud) =100%

% Current year bioturbation 41 Past bioturbation present? Y N | % Hoof punch 0

Site history, stand age, comments: area burned in the 1997 Harmony Grove fire. Has recovered nicely. Very low levels of nonnative annual grasses & forbs. Stand has relatively low levels of sprouting native perennial shrubs, but good cover of native, established adult shrubs.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** 41 **Total % Vasc Veg cover:** 41

% Cover -Overstory Tree Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 40 **Herbaceous:** 1

Height Class - Overstory Conifer/Hardwood: ____/____ **Low-Medium Tree:** ____ **Shrub:** 03 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Salvia mellifera	80		H	Hypochaeris glabra	41	
S	Artemisia californica	2		H	Cryptantha (ssp.C likely intermedia)	41	
H	Brassica nigra	41		H	Pennsetum fasciculata	41	
H	Dichelostemma capitatum	41		H	Centaurea melitensis	41	
S	Baccharis pilularis	41		H	Bromus madritensis rubens	41	
S	Adolphia californica	5		H	Marah macrocarpus	41	
H	Nassella lepida	2		H	Bothriochloa barbinodis	41	
S	Malacothamnus fasciculatus	1		H	Calystegia macrostegia	41	
S	Eriogonum fasciculatum	10		S	Malosma laurina	1	

Unusual species: Adolphia californica & Bothriochloa barbinodis

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H **Explain:** ____

Phenology (E,P,L): Herb E Shrub E Tree ____ **Other identification or mapping information:**

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Page 2 of Polygon/Stand #: LCCP01

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular

% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
H	Galium angustifolium	<1		

Crossings GolfCourse open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
1 Southern Willow Scrub		Oct. 29, 2009	Patricia McDonnell

GPS wypt #: 1 GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt center of stand _____ (degrees) of Long / Short side

UTME 472327 UTMN 3765945 Zone: 10 / 11 (circle one) Error: ± 25 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 68 ft / m Camera Name/Photograph #'s: No pictures taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape ___ x ___ ft / m or Circle Radius 8 m

Exposure, Actual °: _____ NE NW SE SW Flat Variable /All | Steepness, Actual °: _____ 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 1 BA Stems: 4 Litter: 40 Bedrock: ___ Boulder: ___ Stone: ___ Cobble: ___ Gravel: ___ Fines: 55 =100%
(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments: GPS position taken at center of plot, no knowledge of stand history. Very late in season, prior to meaningful winter rains.

Type/ Level of disturbance codes: 23 / 2 05 1 ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Ø Total % Vasc Veg cover: 49

% Cover -Overstory Tree Conifer/Hardwood: ___/___ Low-Medium Tree: 27 Shrub: Ø Herbaceous: 22

Height Class - Overstory Conifer/Hardwood: ___/___ Low-Medium Tree: 04 Shrub: 03 Herbaceous: 02

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	Bulbostylis maritima	<1		H	Typha latifolia	3	
H	Schoenoplectus californicus	12		H	Ambrosia psilostachya	<1	
H	Apium graveolens	6		S	Baccharis salicifolia	<1	
H	Picris echioides	1		T	Salix lasiolepis	27	
H	Hemizonia californica	<1					
H	Pluchea odorata	<1					
S	Baccharis pilularis	<1					
S	Malosma laurina	<1					
H	Centaurea sellowana	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree L Other identification or mapping information:

Crossings Golf Course open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
2 Southern Willow Scrub		Oct 29, 2009	Patricia McConnell

GPS wypt #: 2 GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt SE corner (degrees) of Long / Short side

UTME 4 7 1 7 3 6 UTMN 3 6 6 5 9 9 7 Zone: 10 (11) (circle one) Error: ± 3 ft / m / ~~prop~~

GPS within stand? (Yes) No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 50 ft / m Camera Name/Photograph #'s: No pictures taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / ~~1000~~ | Plot Shape 5 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: _____ NE NW SE SW (Flat) Variable / All | Steepness, Actual °: _____ (0°) 1-5° 5-25° >25°

Topography: Macro: top upper mid (lower) bottom | Micro: convex flat concave ~~undulating~~

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/(Riparian) (circle one)

% Surface cover

H20: ____ BA Stems: 3 Litter: 60 Bedrock: ____ (Incl. outcrops) Boulder: ____ (>60cm diam) Stone: ____ (25-60cm) Cobble: ____ (7.5-25cm) Gravel: ____ (2mm-7.5cm) Fines: 37 (Incl sand, mud) =100%

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments:

Evidence of invasive removals years past. Typical, depauperate urban drainage. Very late in year, prior to meaningful winter rains. Argentine ants very abundant.

Type/ Level of disturbance codes: 23/ 2 05/ 1 31/ 2 ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) **% Non-Vasc cover:** Ø **Total % Vasc Veg cover:** 56

% Cover -Overstory Tree Conifer/Hardwood: ____/____ **Low-Medium Tree:** 52 **Shrub:** 3 **Herbaceous:** 1

Height Class - Overstory Conifer/Hardwood: ____/____ **Low-Medium Tree:** 04 **Shrub:** 03 **Herbaceous:** 03

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	Picris echioides	<1		H	Pluchea odorata	<1	
H	Apium graveolens	<1		H	Polypogon monspeliensis	<1	
H	Polypogon interruptus	<1	✓		Salix lasiolepis	52	
S	Baccharis pilularis	<1					
S	Baccharis salicifolia	1					
H	Schoenoplectus californicus	1					
S	Myoporum laetum	2					
H	Cortaderia selloana	<1					
H	Solanum nigrum	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: Site surrounded by riparian restoration

Confidence in alliance identification: L M H **Explain:** _____

Phenology (E,P,L): Herb L Shrub L Tree L **Other identification or mapping information:**

Polypogon interruptus identified at home office

Lake Calaveras Open Space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
3 Riparian forest		Nov. 09 2009	Patricia McConnell

GPS wypt #: 3 GPS name: ____ Datum: ____ or NAD83. Bearing, left axis at SW pt ____ (degrees) of Long / Short side

UTME 474006 UTMN 3670463 Zone: 10 / 11 (circle one) Error: ± 3.0 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees) S center

Elevation: 214 ft / m Camera Name/Photograph #'s: No picture taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape: 5 x 75 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: ____ NE NW SE SW Flat Variable /All | Steepness, Actual °: ____ 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: N/A Soil Texture code: ____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: 0 BA Stems: 4 Litter: 75 Bedrock: ____ (Incl. outcrops) Boulder: ____ (>60cm diam) Stone: ____ (25-60cm) Cobble: ____ (7.5-25cm) Gravel: ____ (2mm-7.5cm) Fines: 21 (Incl sand, mud) =100%

% Current year bioturbation ____ Past bioturbation present? Y / N | % Hoof punch ____

Site history, stand age, comments:

History unknown. Mature stand is surrounded on all sides by open willow scrub.

Type/ Level of disturbance codes: ____/____ ____/____ ____/____ ____/____ ____/____ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: Total % Vasc Veg cover: 80

% Cover -Overstory Tree Conifer/Hardwood: ____/37 Low-Medium Tree: ____ Shrub: 10 Herbaceous: 18 33

Height Class - Overstory Conifer/Hardwood: ____/05 Low-Medium Tree: ____ Shrub: 03 Herbaceous: 02

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
T	Salix goodingii	37					
~~S/H~~	Apium graveolens	18					
	Bolboschoenus						
H	Schoenoplectus californicus	15					
S	Baccharis salicifolia	6					
S	Toxicodendron diversilobum	4					
S	Artemisia douglasiana	<1					
H	Solanum americanum	<1					

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Salix goodingii - Schoenoplectus californicus

Field-assessed association name (optional): ____

Adjacent alliances: Schoenoplectus - Baccharis salicifolia - Salix lasiolepis

Confidence in alliance identification: L M H Explain: ____

Phenology (E,P,L): Herb E Shrub ____ Tree ____ Other identification or mapping information:

Lake Calaveras Open Space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
4 Chemise Chaparral		Nov. 9 2009	Patricia McConnell

GPS wypt #: 4 GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 474303 UTMN 3670475 Zone: 10 / 11 (circle one) Error: ±2-3 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 176 ft / m Camera Name/Photograph #'s: None taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape ___ x ___ ft / m or Circle Radius ___ ft / m

Exposure, Actual °: 316° NE NW SE SW Flat Variable /All | Steepness, Actual °: 5° 0° 1-5° 5-25° >25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: ___ BA Stems: 2 Litter: 20 Bedrock: ___ Boulder: ___ Stone: ___ Cobble: ___ Gravel: ___ Fines: 78 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments: Fire scarring evident. Gopher balls present throughout. Some horse usage evident, but soil has well-developed crust.

Type/ Level of disturbance codes: 19/2 15/2 2/1 29/1 17/1 "Other" 5/1

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 19 Total % Vasc Veg cover: 39

% Cover -Overstory Tree Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 29 Herbaceous: 10

Height Class - Overstory Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 03 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
N	cladonia sp. (cup lichen)	18		S	Salvia mellifera	1	
N	club moss	1		S	Yucca Schidigera	<1	
S	Adenostoma fasciculata	25		H	Plantago erecta	<1	
S	Xylococcus bicolor	2		N	filago gallica	<1	
H	Nassella lepida	8		H	Stylocline gnaphaloides	4	
H	Navarretia hamata	1		S	Galium angustifolium	1	
S	Eriophyllum confertiflorum	<1		H	Jepsonia parryi	<1	
H	Vulpia myuros	1					
N	Deinandra fasciculata	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb L Shrub L Tree ___ Other identification or mapping information:

Very late season, prior to mid-month winter rains

Lake Calaveras open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance / Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
5 scrub oak chaparral		Nov. 10 2009	Patricia McConnell

GPS wypt #: 5 GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt _____ (degrees) of Long / Short side

UTME 574253 UTMN 3670299 Zone: 10 (11) (circle one) Error: ± 2.5 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 862 ft / m Camera Name/Photograph #'s: None taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: 340 NE NW SE SW Flat Variable/All | Steepness, Actual °: 5° 0° (1-5°) 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: ____ BA Stems: 2 Litter: 87 Bedrock: ____ (Incl. outcrops) Boulder: ____ (>60cm diam) Stone: ____ (25-60cm) Cobble: ____ (7.5-25cm) Gravel: ____ (2mm-7.5cm) Fines: 10 (Incl sand, mud) =100%

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments:

Plot contains scrub oak thicket + opening, thought to characterize this area. Located within a series of shallow ravines on a mostly North-facing hillside. No visible disturbances.

Type/ Level of disturbance codes: ____/____ ____/____ ____/____ ____/____ ____/____ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 1 Total % Vasc Veg cover: 73

% Cover -Overstory Tree Conifer/Hardwood: ____/____ Low-Medium Tree: ____ Shrub: 67 Herbaceous: 6

Height Class - Overstory Conifer/Hardwood: ____/____ Low-Medium Tree: ____ Shrub: 04 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Quercus berberidifolia	55		S	Rhus integrifolia	2	
H	Nassella lepida	4		N	Cladonia (cup lichen)	1	
S	Mimulus aurantiacus	1		H	Potentilla sp.	<1	
H	Muhlenbergia rigens	1		H	Bromus madritensis	<1	
S	Baccharis pilularis	1		H	Deinandra fasciculata	<1	
S	Lonicera subspicata	2		H	Muhlenbergia microsperma	<1	
S	Toxicodendron diversilobum	3		S	Eriophyllum confertiflorum	<1	
S	Hazardia squarrosa	1		H	Cordylanthus sp.	<1	
S	Heteromeles arbutifolia	2		H	Gnaphalium californicum	<1	

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: Chamise chaparral North + East

Confidence in alliance identification: L M H **Explain:** _____

Phenology (E,P,L): Herb L Shrub L Tree ____ **Other identification or mapping information:**

Very late season, prior to 1st meaningful winter rains.

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

RELEVE SPECIES SHEET (Revised 9/10/09)

Scrub oak chaparral

Page 2 of Polygon/Stand #: ~~GPS way~~point 5: P. McConnell

Lake Calaveras Open Space

Stratum categories: T = Overstory tree, U = Understory tree, S = Shrub, H = Herb, and N=Non-vascular

% Cover Intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, >75%

Strata	Vascular plant name or lichen/bryophyte	% Cover	Collection	Final species determination
N	Club moss	<1		
H	Vulpia myuros	<1		
H	Juncus sp.	<1		
S	Galium angustifolium	<1		
S	Yucca schidigera	<1		
H	Carex triquetra	<1		
S	Lotus scoparius	<1		
H	Leymus condensatus	<1		
U	Quercus agrifolia	<1		

Research Center open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
6 Southern mixed chapp.		Nov. 12, 2009	Patricia McDonnell

GPS wypt #: 6 GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at (SW) pt _____ (degrees) of Long / Short side

UTME 4 7 2 6 2 8 UTMN 3 6 6 6 7 0 7 Zone: 10 (T) (circle one) Error: ± 3 ft / m / pdop

GPS within stand? (Yes) / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 101 (ft) / m Camera Name/Photograph #'s: None taken

Stand Size (acres): (<1) 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x ___ (m) or Circle Radius ___ ft / m

Exposure, Actual °: 20° (NE) NW SE SW Flat Variable /All | Steepness, Actual °: 18° 0° 1-5° (5-25°) > 25°

Topography: Macro: top upper (mid) lower bottom | Micro: convex flat concave (undulating)

Geology code: _____ Soil Texture code: _____ | (Upland) or Wetland/Riparian (circle one)

% Surface cover

H20: ___ BA Stems: 3 Litter: 92 Bedrock: ___ Boulder: <1 Stone: <1 Cobble: ___ Gravel: ___ Fines: 5 =100%

(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments: No visible disturbance. Plot estimated before rains, therefore some herbaceous components are missing.

Type/ Level of disturbance codes: ___/___ ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), (S3) mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: (H1) (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 0 Total % Vasc Veg cover: 39

% Cover -Overstory Tree Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 39 Herbaceous: <1

Height Class - Overstory Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 04 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Mimulus aurantiacus	2					
H	Dryopteris arguta	<1	✓				
S	Xylococcus bicolor	7					
	Comarostaphylis diversifolia						
S	ssp. diversifolia	10					
S	Rhus integrifolia	10					
S	Heteromeles arbutifolia	5					
S	Malosma laurina	4					
S	Adenostoma fasciculatum	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Comarostaphylis - Rhus - Xylococcus

Field-assessed association name (optional): _____

Adjacent alliances: Chamise - chaparral to south

Confidence in alliance identification: L M H Explain: _____

Phenology (E,F,L): Herb L Shrub L Tree ___ Other identification or mapping information:

Dryopteris identified at home office

Carlsbad Village Drive open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
CVDCSS1		2/12/10	(Patrick McConnell) Dorene Law

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt 300 (degrees) of Long / Short side

UTME 470579 UTMN 3670508 Zone: 10 / (11) (circle one) Error: ± 1 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 100 ft / m Camera Name/Photograph #'s: None Taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius ___ ft / m

Exposure, Actual °: 214° NE NW SE SW Flat Variable /All | Steepness, Actual °: 22° 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: ___ BA Stems: 1 Litter: 27 Bedrock: ___ (Incl. outcrops) Boulder: ___ (>60cm diam) Stone: ___ (25-60cm) Cobble: ___ (7.5-25cm) Gravel: ___ (2mm-7.5cm) Fines: 72 (Incl sand, mud) =100%

% Current year bioturbation ___ Past bioturbation present? Y / N | % Hoof punch ___

Site history, stand age, comments: Site appears to have been a restoration in the distant past. Encelia not fl, otherwise cover would be >.

Type/ Level of disturbance codes: 05/L ___/___ ___/___ ___/___ ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: 0 Total % Vasc Veg cover: 34

% Cover -Overstory Tree Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 32 Herbaceous: 2

Height Class - Overstory Conifer/Hardwood: ___/___ Low-Medium Tree: ___ Shrub: 02 Herbaceous:

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Encelia californica	28		H	Chamaesyce polycarpa	<1	
S	Opuntia littoralis	2		H	Centaurea melitensis	<1	
S	Artemisia californica	1					
S	Baccharis pilularis	1					
S	Mirabilis laevis	<1					
S	Isomeris arborea	<1					
H	Nassella lepida	1					
H	Brassica nigra	<1					
H	Urtica urens	1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: Encelia californica - Opuntia

Field-assessed association name (optional): _____

Adjacent alliances: Southern willow scrub at bottom of hill to west.

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb E Shrub E Tree ___ Other identification or mapping information:

Point taken @ SE corner of plot at top of hill

Los Manos open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
LMCHAP		2/12/10	Patrick McConnell Dorene Lew

GPS wypt #: _____ GPS name: _____ Datum: _____ or NAD83. Bearing, left axis at SW pt_____ (degrees) of Long / Short side

UTME 4 7 5 8 3 7 UTMN 3 6 6 7 9 1 0 Zone: 10 (11) (circle one) Error: ± 20 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)

Elevation: 405 ft / m Camera Name/Photograph #'s: None taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 20 x 20 ft / m or Circle Radius____ft / m

Exposure, Actual °: 320 NE NW SE SW Flat Variable /All | Steepness, Actual °: 20° 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: _____ Soil Texture code: _____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20:____ BA Stems: 2 Litter: 60 Bedrock:____ Boulder:____ Stone:____ Cobble:____ Gravel:____ Fines: 38 =100%
(Incl. outcrops) (>60cm diam) (25-60cm) (7.5-25cm) (2mm-7.5cm) (Incl sand, mud)

% Current year bioturbation _____ Past bioturbation present? Y / N | % Hoof punch _____

Site history, stand age, comments: Old growth champarral. Modal shrub height 7.3m. No visible disturbance.

Type/ Level of disturbance codes: ____/____ ____/____ ____/____ ____/____ ____/____ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: <1 Total % Vasc Veg cover: 36

% Cover -Overstory Tree Conifer/Hardwood: ____/____ Low-Medium Tree: _____ Shrub: 30 Herbaceous: <1

Height Class - Overstory Conifer/Hardwood: ____/____ Low-Medium Tree: _____ Shrub: 04 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
S	Xylococcus bicolor	10					
S	Rhus integrifolia	8					
S	Adenostoma fasciculata	10					
S	Salvia mellifera	3					
S	Mimulus aurantiacus	5					
H	Gnaphalium californicum	<1					
H	Pentagramma triangularis	<1					
N	Club moss	<1					

Unusual species: _____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: _____

Field-assessed association name (optional): _____

Adjacent alliances: _____

Confidence in alliance identification: L M H Explain: _____

Phenology (E,P,L): Herb E Shrub E Tree____ Other identification or mapping information:

Lake Calavera Open Space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009) [Relevé circled]

For Office Use:	Final database #:	Final vegetation type name:	Alliance / Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
S042_Grass1		01/29/10	(P. McConnell), Dorene Lew

GPS wypt #: _____ **GPS name:** _____ **Datum:** _____ **or NAD83. Bearing, left axis at SW pt** Not noted **(degrees) of Long / Short side**

UTME 474318 **UTMN** 3670555 **Zone: 10 / 11 (circle one)** [11 circled] **Error: ±** 2.0 **ft / m / pdop** [pdop circled]

GPS within stand? Yes / No [Yes circled] **If No, cite from waypoint to stand, distance _____(meters) & bearing _____(degrees)**

Elevation: 149 **ft / m** [ft circled] **Camera Name/Photograph #'s:** N ... taken

Stand Size (acres): <1, 1-5, >5 [1-5 circled] | **Plot Size (m²):** 10 / 100 / 400 / 1000 [100 circled] | **Plot Shape** 10 x 10 **ft / m** [m circled] **or Circle Radius** ___ **ft / m**

Exposure, Actual °: 340 **NE** [circled] NW SE SW Flat Variable /All | **Steepness, Actual °:** 4 0° 1-5° 5-25° > 25°

Topography: Macro: top upper **mid** [circled] lower bottom | **Micro:** convex **flat** [circled] concave undulating

Geology code: ______ **Soil Texture code:** ______ | **Upland** [circled] or **Wetland/Riparian** (circle one)

% Surface cover

H20: ___ **BA Stems:** 3 **Litter:** 80 **Bedrock:** ___ (Incl. outcrops) **Boulder:** ___ (>60cm diam) **Stone:** ___ (25-60cm) **Cobble:** ___ (7.5-25cm) **Gravel:** ___ (2mm-7.5cm) **Fines:** 17 (Incl sand, mud) **=100%**

% Current year bioturbation _____ **Past bioturbation present? Y / N** | **% Hoof punch** _____

Site history, stand age, comments: Lots of trail cutting in vicinity

Type/ Level of disturbance codes: 02/M 05/H 20/M 29/H ___/___ **"Other"**

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), **T2** (1-6" dbh), **T3** (6-11" dbh), **T4** (11-24" dbh), **T5** (>24" dbh), **T6** multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 [circled] seedling (<3 yr. old), **S2** young (<1% dead), **S3** mature (1-25% dead), **S4** decadent (>25% dead)

Herbaceous: H1 [circled] (<12" plant ht.), **H2** (>12" ht.) **% Non-Vasc cover:** Ø **Total % Vasc Veg cover:** 56

% Cover -Overstory Tree Conifer/Hardwood: ___/___ **Low-Medium Tree:** ___ **Shrub:** <1 **Herbaceous:** 56

Height Class - Overstory Conifer/Hardwood: ___/___ **Low-Medium Tree:** ___ **Shrub:** 01 **Herbaceous:** 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	Erodium botrys	44		N	Sisyrinchium bellum	<1	
H	Hypochaeris glabra	4		H	Nassella lepida	<1	
H	Lolium multiflorum	<1		H	Daucus pusillus	<1	
H	Distichlis spicata	3		H	Deinandra fasciculata	<1	
H	Vulpia myuros	1		S	Lotus scoparius	<1	
H	Bromus madritensis	2					
H	Avena sp.	1					
H	Centaurea melitensis	1					

Unusual species: ______

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ______

Field-assessed association name (optional): ______

Adjacent alliances: Chamise-chaparral to the South-uphill

Confidence in alliance identification: L M H **Explain:** ______

Phenology (E,P,L): Herb E **Shrub** ___ **Tree** ___ **Other identification or mapping information:**

Lane Calaveras-open space

CNPS and CDFG Combined Vegetation Rapid Assessment and Relevé Field Form

Relevé or Rapid Assessment (Circle One) (Revised Sept 10, 2009)

For Office Use:	Final database #:	Final vegetation type name:	Alliance Association

I. LOCATIONAL/ENVIRONMENTAL DESCRIPTION

Polygon/Stand #:	Air photo:	Date:	Name(s) of surveyors (circle recorder):
5042-Grass 2		01/29/10	P. McConnell, Dorene Low

GPS wypt #: ____ GPS name: ____ Datum: ____ or NAD83. Bearing, left axis at SW pt 330° N (degrees) of Long / Short side

UTME 474150 UTMN 3670463 Zone: 10 / 11 (circle one) Error: ± 2 ft / m / pdop

GPS within stand? Yes / No If No, cite from waypoint to stand, distance ____(meters) & bearing ____(degrees)

Elevation: 106 ft / m Camera Name/Photograph #'s: None taken

Stand Size (acres): <1, 1-5, >5 | Plot Size (m^2): 10 / 100 / 400 / 1000 | Plot Shape 10 x 10 ft / m or Circle Radius ____ ft / m

Exposure, Actual °: ____ NE NW SE SW Flat Variable /All | Steepness, Actual °: ____ 0° 1-5° 5-25° > 25°

Topography: Macro: top upper mid lower bottom | Micro: convex flat concave undulating

Geology code: ____ Soil Texture code: ____ | Upland or Wetland/Riparian (circle one)

% Surface cover

H20: ____ BA Stems: 4 Litter: 71 Bedrock: ____ (Incl. outcrops) Boulder: ____ (>60cm diam) Stone: ____ (25-60cm) Cobble: ____ (7.5-25cm) Gravel: ____ (2mm-7.5cm) Fines: 25 (Incl sand, mud) =100%

% Current year bioturbation ____ Past bioturbation present? Y / N | % Hoof punch ____

Site history, stand age, comments: Disturbed native grassland. Surroundings w/cross-cross trails.

Type/ Level of disturbance codes: 02/M 05/M 20/M 29/M ___/___ "Other"

II. HABITAT AND VEGETATION DESCRIPTION

Tree DBH : T1 (<1" dbh), T2 (1-6" dbh), T3 (6-11" dbh), T4 (11-24" dbh), T5 (>24" dbh), T6 multi-layered (T3 or T4 layer under T5, >60% cover)

Shrub: S1 seedling (<3 yr. old), S2 young (<1% dead), S3 mature (1-25% dead), S4 decadent (>25% dead)

Herbaceous: H1 (<12" plant ht.), H2 (>12" ht.) % Non-Vasc cover: <1 Total % Vasc Veg cover: 78

% Cover -Overstory Tree Conifer/Hardwood: ____/____ Low-Medium Tree: ____ Shrub: <1 Herbaceous: 78

Height Class - Overstory Conifer/Hardwood: ____/____ Low-Medium Tree: ____ Shrub: 01 Herbaceous: 01

Height classes: 01=<1/2m 02=1/2-1m 03=1-2m 04=2-5m 05=5-10m 06=10-15m 07=15-20m 08=20-35m 09=35-50m 10=>50m

Species, Stratum, and % cover. Stratum categories: T= Overstory tree, U= Understory Tree, S = Shrub, H= Herb, N= Non-vascular.
% cover intervals for reference: <1%, 1-5%, >5-15%, >15-25%, >25-50%, >50-75%, 75%.

Strata	Species	% cover	C	Strata	Species	% cover	C
H	Erodium botrys	18		H	Lupinus bicolor	<1	
H	Sisyrinchium bellum	12		H	Daucus pusillis	<1	
H	Vulpia myuros	8		S	Solanum parishii	<1	
H	Hypochaeris glabra	33		H	Juncus sp.	<1	
H	Distichlis spicata	6					
H	Nasella pulchra	1					
H	Avena sp.	<1					
H	Filago gallica	<1					
H	Deinandra fasciculata						

Unusual species: ____

III. INTERPRETATION OF STAND

Field-assessed vegetation alliance name: ____

Field-assessed association name (optional): ____

Adjacent alliances: ____

Confidence in alliance identification: L M H Explain: ____

Phenology (E,P,L): Herb E Shrub ____ Tree ____ Other identification or mapping information:

Some herbs too early in season to tell apart/distinguish specific identity.

Appendix 4.

Species Richness within Coastal Sage Scrub Monitoring Plots

Species Richness within CSS Plots

CSS plot ID:	11C	15C	2C	33C	46C	6C	Number of subplots	Proportion of 18 subplots
Aspect:	north	north	north	north	south	south		
Exotic forbs								
Anagalis arvensis	3	3	3	2	1		12	0.67
Brassica nigra		2	1	1			4	0.22
Carduus pycnocephalus		2		1			3	0.17
Centaurea melitensis		1	1				2	0.11
Cerastium glomeratum	3	2		3			8	0.44
Erodium cicutarium	1	1		1			3	0.17
Filago gallica	2	2	1	1		1	7	0.39
Galium aparine		3		2			5	0.28
Hypochaeris glabra	2		1			1	4	0.22
Lactuca serriola		1					1	0.06
Picris echioides	1						1	0.06
Silene gallica	1						1	0.06
Solanum sp.	1	1					2	0.11
Sonchus asper	1	3					4	0.22
Sonchus oleraceus		2	2	2			6	0.33
Stellaria media				1			1	0.06
Stellaria pallida				1			1	0.06
Exotic grass								
Bromus hordeaceus	1	1					2	0.11
Bromus madritensis ssp. *rubens*	3	3	3	3		1	13	0.72
Gastridium ventricosum	3	2					5	0.28
Polypogon monspeliensis		1					1	0.06
Vulpia bromoides	2	1		2			5	0.28
Vulpia myuros var. *myuros*	1	2	1	3			7	0.39
Native forbs								
Ancistrocarphus filagineus		1		1			2	0.11
Antirrhinum kellogii					1	1	2	0.11
Antirrhinum nuttallianum	2	1			1	1	5	0.28
Aphanes occidentalis	2						2	0.11
Apiastrum angustifolium			3				3	0.17
Calystegia macrostegia		1				1	2	0.11
Camissonia bistorta						1	1	0.06
camissonia sp.						1	1	0.06
Cardamine sp.				1			1	0.06
Cardionema ramosissima						2	2	0.11
Carex triquetra					1		1	0.06
Chlorogalum parviflorum			3				3	0.17
Claytonia sp.	1	2		3			6	0.33
Conyza sp.		2	1	1		1	5	0.28
Crassula connata	1	1	2	1		1	6	0.33

CSS plot ID:	11C	15C	2C	33C	46C	6C	Number of subplots	Proportion of 18 subplots
Aspect:	north	north	north	north	south	south		
Cryptantha intermedia					1	1	2	0.11
Cryptantha micromeris				1		1	2	0.11
Cryptantha sp.						1	1	0.06
Cuscuta sp.					1		1	0.06
Daucus pusillus	2	1	2	2		1	8	0.44
Deinandra fasciculata	1	1	2				4	0.22
Dichelostemma capitatum ssp. *capitatum*			3			1	4	0.22
Dichondra occidentalis			1				1	0.06
Eucrypta chrysanthemifolia				3			3	0.17
Eucrypta chrysanthemifolia var. *chrysanthemifolia*						1	1	0.06
Galium angustifolium	1						1	0.06
Gnaphalium californicum	3	2		3	2		10	0.56
Gnaphalium palustre						1	1	0.06
Gnaphalium sp.			1				1	0.06
Gnaphalium stramineum	2	2	1	2	3	1	11	0.61
Linaria canadensis	1		1	1		2	5	0.28
Lotus hamatus		1					1	0.06
Mimulus aurantiacus	1						1	0.06
Navarretia hamata			1				1	0.06
Parietaria hespera	1			2		1	4	0.22
Pentagramma triangularis	1						1	0.06
Polycarpon depressum					1		1	0.06
Pseudognaphalium biolettii			1				1	0.06
Pterostegia drymarioides	3	2	2	3	2	2	14	0.78
Ranunculus hebecarpus				2			2	0.11
Sanicula sp.	1						1	0.06
Scrophularia californica				2			2	0.11
Selaginella cinerascens	1						1	0.06
Silene laciniata ssp. *laciniata*			1				1	0.06
Stachys ajugoides var. *rigida*		1					1	0.06
Stephanomeria sp.		1				1	2	0.11
Stylocline gnaphaloides						1	1	0.06
Trifolium microcephalum				1			1	0.06
Native grass								
Leymus condensatus		1					1	0.06
Melica imperfecta	2	1	1			1	5	0.28
Nassella lepida	2	2	3	1		2	10	0.56
Nassella pulchra	1						1	0.06
Vulpia microstachys				1			1	0.06
Vulpia octoflora var. *Octoflora*			1		1	1	3	0.17
Non vascular								
Asterella sp.	1			2			3	0.17

CSS plot ID:	11C	15C	2C	33C	46C	6C	Number of subplots	Proportion of 18 subplots
Aspect:	north	north	north	north	south	south		
Cladonia sp.	2	1					3	0.17
Unknown moss	3	2		2	1		8	0.44
Native Shrubs								
Artemisia californica	1	2		1	1	2	7	0.39
Baccharis pilularis		1	1		1		3	0.17
Croton californicus				1			1	0.06
Cryptantha micromeris				1			1	0.06
Cylindropuntia prolifera						1	1	0.06
Dudleya pulverulenta						1	1	0.06
Encelia californica						2	2	0.11
Eriogonum fasciculatum var. *fasciculatum*			2		1	3	6	0.33
Eriophyllum confertiflorum var. *confertiflorum*			3			2	5	0.28
Galium angustifolium	1	1	2	1		1	6	0.33
Hazardia squarrosa var. *squarrosa*				2		1	3	0.17
Heteromeles arbutifolia	1		1				2	0.11
Lotus scoparius			2	2	1	2	7	0.39
Malacothamnus fasciculatus				1			1	0.06
Malosma laurina		1	1	3	1		6	0.33
Marah macrocarpus var. *macrocarpus*	1		1	3	3	1	9	0.50
Mimulus aurantiacus	2		2	3	2	1	10	0.56
Mirabilis laevis				1	1	1	3	0.17
Opuntia littoralis						2	2	0.11
Rhus integrifolia	1	2	1			1	5	0.28
Salvia mellifera			2	2	3	3	10	0.56
Yucca schidigera						1	1	0.06